

BID DOCUMENTS AND SPECIFICATIONS FOR:

**RECONSTRUCTION OF
SPY POND FIELD TENNIS COURTS
Arlington, MA**

Bid # 15-03

February 25, 2015

Prepared for:

**Parks and Recreation Commission
Arlington, Massachusetts**

Prepared by:

**Leonard Design Associates
Landscape Architects
Arlington, Massachusetts**

**Gala-Simons Associates
Civil Engineers
Lexington, Massachusetts**

**Spy Pond Field Tennis Court Renovation
Arlington, MA**

Table of Contents
For Contract Documents

<u>Section</u>	<u>Page Numbers</u>
Advertisement/Invitation to Bid	1 - 3
Instructions to Bidders	1 - 7
Bid Form, Bond Premiums, Non-collusion Affidavit, EEO Affidavit, Certificate of Payment of State Taxes, Certificate as to Corporate Bidder	1 - 10
Unit Prices	1 - 2
Agreement/Contract Form	1 - 8
Performance Bond	1 - 2
Labor and Materials Payment bond	1 - 2
General Conditions	1 - 40
Supplementary General Conditions	1 - 13
Massachusetts Statutes	1-6
Attachment B – Mass General Laws	1-28
Change Orders	1-7
Town of Arlington Equal Employment Opportunity Requirements/	
Town of Arlington Minority and Women Business Enterprise Set Aside Requirements	1
Commonwealth of Massachusetts Wage Rates/ Labor Standards	1 - 39

DIVISION 1: GENERAL REQUIREMENTS

01010	General Requirements	01010-1 - 01010-9
01230	Alternates	01230-1 - 01230-2

DIVISION 2: SITE WORK

02000	Site Work	02000-1 - 02000-2
02100	Site Preparation	02100-1 - 02100-4
02200	Earthwork	02200-1 - 02200-8, 02200-a1 – 02200-a6
02510	Bituminous Concrete Pavement	02510-1 – 02510-4
02580	Pavement Marking	02580-1 – 02580-3
02730	Drainage	02730-1 - 02730-8
02870	Site Furnishings	02870-1 – 02870-3
02875	Fencing	02875-1 – 02875-5
02930	Topsoiling and Seeding	02930-1 - 02930-7
02950	Trees, Plants, and Groundcovers	02950-1 – 02950-10
03300	Cast-in-place Concrete	03300-1 – 03300-6
04200	Tennis Practice Wall	04200-1 – 04200-7

APPENDICES

Arlington Conservation Commission Order of Conditions	1-15
---	------

CONSTRUCTION DRAWING LIST

<u>Drawing #</u>	<u>Drawing Title</u>
L.1	Existing Conditions and Site Preparation
L.2	Layout, Materials and Planting Plan
L.3	Site Details
L.4	Tennis Court Layout
C.1	Drainage Plan
C.2	Drainage Details

RECONSTRUCTION OF SPY POND FIELD TENNIS COURTS

INVITATION TO BID

BID 15-03

Sealed bids for:

RECONSTRUCTION OF WELLINGTON PARK TENNIS COURTS

in accordance with the Bidding and Contract Documents prepared by:

Leonard Design Associates, Landscape Architects
95 Ronald Rd.
Arlington, MA 02474
(781) 641-0750

will be received by:

TOWN OF ARLINGTON acting through its Town Manager

Hereinafter called the Awarding Authority, at the Office of the Purchasing Agent/Town Manager's Office, Robbins Memorial Town Hall Annex, 730 Massachusetts Avenue, Arlington, MA 02476, no later than the time and date specified below, at which time and place they will be publicly opened and read aloud. Any bid received after the time and date specified will be set aside and not considered.

Bidding procedures and award of the contract shall be in accordance with the applicable provisions of the Commonwealth of Massachusetts General Laws, Chapter 30, Section 39M as amended and Chapter 149, Sections 44A through 44L, inclusive, as amended.

No pre-bid conference is scheduled for this project. Questions may be addressed to the Landscape Architect until 5:00 pm Thursday March 12, 2015. Contractors should have visited the site prior to submitting questions. A written addendum answering questions will be issued if necessary.

General Bids due: Wednesday March 18, 2015, 10:00 am
at Robbins Memorial Town Hall Annex
730 Massachusetts Avenue, Arlington, MA 02476

In general, the Project consists of reconstruction of the tennis court complex at Spy Pond Field on Wellington Street in Arlington. The Project includes demolition and removal of the existing tennis courts, fencing, drainage, reprocessing bituminous concrete and base materials for use in the new tennis court construction, new tennis courts, fencing, gates, and related site improvements. An add alternate for a reduced size junior tennis court is included.

The project is to begin on or about April 15 2015, for initial coordination, shop drawings, submittals and ordering

of materials. The area will be available for construction as soon as the contract is approved. The completion date for the project is September 15, 2015. A general proposed construction schedule is required as part of the bid.

Bidders are required to state their experience and qualifications to perform the work on the bid form. Note that demonstrated experience in the successful construction and installation of tennis courts is required.

If mailed, the sealed proposals shall be addressed and mailed to:

Town Purchasing Agent, Town Hall Annex
730 Massachusetts Avenue
Arlington, MA 02476

Plans and Specifications will be available on the Arlington Web Site for no charge: <http://arlingtonma.gov/departments/purchasing>, or at the Office of the Purchasing Agent (Town Manager's Office), first floor, Town Hall Annex, 730 Massachusetts Avenue, Arlington, MA 02476, on or after April 15, 2011, for a refundable deposit of \$100.00 (Cashiers or Treasurer's check only) for each set of Plans and Specifications. Bidders may obtain Plans and Specifications by mail for an additional \$25.00 non-refundable mailing fee, to be submitted on a separate check. Checks shall be made payable to "Town of Arlington". One set of Contract Documents may be obtained for each General Contractor requesting Plans and Specifications.

A bid deposit in the amount of five percent (5%) on the Bid amount, including any and all alternates, shall be submitted with each Bid. Bid deposit shall be in the form of Certified Check, or a Treasurer's or Cashier's Check issued by a responsible or trust company payable to the Town of Arlington or a bid bond (a) in a form satisfactory to the Awarding Authority, (b) with a surety company qualified to do business in the Commonwealth of Massachusetts and (c) conditioned upon faithful performance by the principal of the agreements contained in the Bid. Return of bid deposits will be in accordance with the provisions of the applicable General Laws. All bid bonds shall be retained by the Town of Arlington unless accompanied by a stamped, self-addressed envelope.

The Awarding Authority will reject any Bid when required to do so by the above referenced General Laws. In addition, the Awarding Authority reserves the right to waive any informalities in bidding and to reject any and all bids if it deems it to be the public interest to do so.

The successful bidder will be required to furnish a Performance Bond and a Labor and Materials Payment bond, each in the amount of 100% of the Contract Amount. The cost of such bonds, including any and all alternates, shall be stated on the bid form. Such bonds shall be of a surety company qualified to do business under the laws of the commonwealth of Massachusetts.

Wages and contributions to be paid employees on the Project shall not be less than those established by the Commissioner of the Department of Labor and Industries of the commonwealth of Massachusetts in accordance with Chapter 149, Sections 26 to 27D inclusive, of the above-referenced General Laws.

Deposits will be refunded upon return of complete Bidding and contract Documents in good condition within ten days after opening of Bids; otherwise the deposit shall become the property of the Awarding Authority.

The Bidding and Contract Documents may be examined during regular office hours at Office of the Awarding Authority:

Purchasing Agent/Town Manager's Office
Town Hall Annex
730 Massachusetts Ave.
Arlington, MA 02476

The Town of Arlington is exempt from sales tax, for which reason Bidders should not include sales taxes in figuring or in references to any bid.

Commonwealth of Massachusetts General Laws Section 149, Sections 44A through 44L, inclusive and Chapter 30, Sections 39F through 39P inclusive, are incorporated herein by reference. Any inconsistency between the Invitation to Bid, Instructions to Bidders, Bid Forms, Conditions of the Contract and any other contract documents and these Statutes, or any other applicable statutes, bylaws or regulation shall be deemed to govern.

The attention of bidders is particularly called to the requirements as to conditions of employment to be observed, the minimum wage rates to be paid under the contract and affirmative action to ensure equal employment opportunity.

No bidder may withdraw his bid for a period of sixty (60) days, excluding Saturdays, Sundays and legal holidays, after the actual date of the opening thereof.

Adam Chapdelaine, Town Manager
TOWN OF ARLINGTON, MASSACHUSETTS
February 25, 2015

SECTION 00100

INSTRUCTIONS TO BIDDERS

1. Receipt and Opening of Bids
2. Location and Work to be Done
3. Deposit on Documents
4. Preparation of Bid
5. Telegraphic Modification
6. Obligation of Bidder
7. Information not Guaranteed
8. Bid Security
9. Time for Completion
10. Addenda and Interpretations
11. Bid Opening Procedure
12. Comparison of Bids
13. Statutes Regulating Competitive Bidding
14. Right to Reject Bid
15. Ability and Experience of Bidder
16. Conditions of Work
17. Security for Faithful Performance
18. Power of Attorney
19. Laws and Regulations
20. Liquidated Damages for Failure to Enter into Contract
21. Items and Indeterminate Items
22. CONTRACTOR Records
23. Bidder Certification – OSHA Training

1. Receipt and Opening of Bids

The Town of Arlington herein called the OWNER, acting by and through its Purchasing Department, will receive sealed Bids for the construction of sanitary sewer rehabilitations.

Such bids addressed to the Purchasing Department and endorsed Bid for Reconstruction of Spy Pond Field Tennis Courts will be received at the Purchasing Department, 730 Massachusetts Avenue, Arlington, MA 02476 until 11:00 AM prevailing time, on Tuesday, March 3, 2015, at which time and place said bids will be publicly opened and read aloud.

If the building at which bids are to be received is closed for any reason on the date and time that bids are due, receipt of bids by the Owner will be postponed until the next business day at the time originally stated for receipt of bids.

Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified will not be considered. The bidder agrees that this bid shall be good and may not be withdrawn for the number of days, after the opening of bids, as stipulated in the FORM OF GENERAL BID.

2. Location and Work to be Done

The location, general characteristics, and principal details of the Work are indicated on a set of drawings titled Reconstruction of Spy Pond Field Tennis Courts

Additional drawings showing details in accordance with which the Work is to be done may be furnished by addendum from time to time during the bidding period by the ENGINEER, and shall then become a part of the Contract Documents.

The CONTRACTOR shall furnish all superintendence, labor, services, materials, equipment, plant, machinery, apparatus, appliances, tools, supplies, bailing, shoring, removal, and all other things necessary to do all work required for the completion of each item of the Work and as herein specified.

The Work to be done and paid for under any item shall not be limited to the exact extent mentioned or described but shall include all incidental work necessary or customarily done for the completion of that item.

3. Deposit on Documents

A deposit, in the amount as specified in Section 00100, ADVERTISEMENT FOR BIDS, in cash or check payable to Town of Arlington will be required on each set of Contract Documents taken. Such deposits will be refunded to all bidders and non-bidders upon the return of said documents in good condition within 30 days after the date of opening of general bids.

To ensure refund of the deposit, Contract Documents (except documents submitted by bidders) must be returned to the Office of the Purchasing Agents, Town of Arlington, 730 Massachusetts Avenue, Arlington, MA 02476 and be accompanied by a letter of transmittal.

4. Preparation of Bid

Each bid must be submitted on the prescribed form in Section 00410. All blank spaces for bid prices must be filled in, in ink or typewritten, in both words and figures.

Each bid must be submitted in a sealed envelope bearing on the outside the name of the bidder, its address, and endorsed with the name of the project as specified in Receipt and Opening of Bids, above.

If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed as specified in Receipt and Opening of Bids, above.

5. Telegraphic Modification

Any bidder may modify its bid by facsimile transmission at any time prior to the scheduled closing time for receipt of bids, provided such telegraphic communication is received by the OWNER prior to the closing time, and, provided further, the OWNER is satisfied that a written confirmation of the telegraphic modification over the signature of the bidder was mailed prior to the closing time.

The telegraphic communication shall not reveal the bid price but shall provide the addition or subtraction or other modification so that the final prices or terms will not be known by the OWNER until the sealed bid is opened. If written confirmation is not received within two days from the closing time, no consideration will be given to the telegraphic communication.

6. Obligation of Bidder

At the time of the opening of bids each bidder will be presumed to have inspected the site and to have read and to be thoroughly familiar with the Contract Documents (including all addenda). The failure or omission of any bidder to examine any form, instrument, or document shall in no way relieve any bidder from any obligation in respect of its bid.

7. Information not Guaranteed

All information given in the Contract Documents relating to subsurface and other conditions, natural phenomena, existing pipes, and other structures is from the best sources at present available to the OWNER. All such information is furnished only for the information and convenience of bidders and is not guaranteed.

It is agreed and understood that the OWNER does not warrant or guarantee that the subsurface or other conditions, natural phenomena, existing pipes, or other structures encountered during construction will be the same as those indicated in the Contract Documents.

It is further agreed and understood that no bidder or CONTRACTOR shall use or be entitled to use any of the information made available to it or obtained in any examination made by it in any manner as a basis of or grounds for any claim or demand against the OWNER or the ENGINEER, arising from or by reason of any variance which may exist between the information made available and the actual subsurface or other conditions, natural phenomena, existing pipes or other structures actually encountered during the construction work, except as may otherwise be expressly provided for in the Contract Documents.

8. Bid Security

Each bid must be accompanied by a certified check, a bid bond, cash, a treasurer's or cashier's check, payable to the OWNER, in the amount stated in Section 00100, ADVERTISEMENT FOR BIDS. Such deposits will be returned to all except the three lowest responsible and eligible bidders within five days, Saturdays, Sundays, and legal holidays excluded, after the opening of bids, and the remaining deposits will be returned promptly after the OWNER and the accepted bidder have executed the Contract, or if no notice of intent to award has been presented to the selected contractor within 30 days, Saturdays, Sundays and holidays excluded, after the date of the opening of bids, upon demand of the bidder at any time thereafter.

9. Time for Completion

The bidder must agree to commence work on or before a date to be specified in the written "Notice to Proceed" from the OWNER and to fully complete the project within the time limit stated in Section 00410, FORM OF GENERAL BID.

10. Addenda and Interpretations

No interpretation of the meaning of the plans, specifications or other prebid documents will be made to any bidder orally. All information given to bidders other than by means of the plans, specifications, or by addenda, as described below, is given informally and shall not be used as the basis of a claim against the OWNER or the ENGINEER.

Every request for such interpretation should be in writing (typed, not handwritten) addressed to Domenic Lanzillotti, Purchasing Officer, Town of Arlington, 730 Massachusetts Avenue, Arlington, Massachusetts 02476, or sent via EMAIL to purchasing@town.arlington.ma and to be given consideration must be received at least eight working days prior to the date fixed for the opening of bids.

Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications which, when issued, will be mailed to all prospective bidders who have not already received them at the respective address furnished by them for such purposes. Bidders picking up sets of bid documents will be given all addenda issued to date and will be required to sign for all documents, acknowledging receipt. Failure of any bidder to receive any such addendum or interpretation shall not relieve such bidder from any obligation under its bid as submitted. All addenda so issued shall become part of the Contract Documents.

11. Bid Opening Procedure

The following list of requirements shall be met by each filed bid.

Bids shall be filed at the place and before the time specified in Receipt and Opening of Bids, above.

The bid and all accompanying documents so required shall be signed by the Bidder or its authorized representative before submission.

All bidders shall include with their bids written acknowledgment of receipt of all addenda. Refer to acknowledgment form provided in Section 00410, FORM OF GENERAL BID.

The total dollar amount of each bid will be read, and the three apparent lowest bids will be selected for further consideration. These three apparent low bids will be read aloud for the benefit of the other bidders and the bid opening procedure will be closed. All those present at the bid opening may examine all bids after the bid opening and after the reading of the three apparent low bids.

12. Comparison of Bids

Bids will be compared on the basis of the quantities and unit and lump sum prices stated in the bid forms.

In the event that there is a discrepancy in Section 00410, FORM OF GENERAL BID between the lump sum or unit prices written in words and figures, the prices written in words will govern.

The OWNER agrees to examine and consider each FORM OF GENERAL BID submitted in consideration of the bidder's agreements, as herein above set forth and as set forth in Section 00410, FORM OF GENERAL BID.

13. Statutes Regulating Competitive Bidding

Any bid, which does not comply with the provisions of Massachusetts General Laws Chapter 30, Section 39M as amended, need not be accepted and the OWNER may reject every such bid.

14. Right to Reject Bid

The OWNER may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids, should the OWNER deem it to be in the public interest to do so.

The OWNER may also reject bids which in its sole judgment are either incomplete, conditional, obscure or not responsive or which contain additions not called for, erasures not properly initialed, alterations, or similar irregularities, or the OWNER may waive such omissions, conditions or irregularities.

15. Ability and Experience of Bidder

No award will be made to any bidder who cannot satisfy the OWNER that it has sufficient ability and experience in this class of work and sufficient capital and plant to enable it to prosecute and complete the work successfully within the time named. The OWNER's decision or judgment on these matters will be final, conclusive, and binding.

The OWNER may make such investigations as it deems necessary, and the bidder shall furnish to the OWNER, under oath if so required, all such information and data for this purpose as the OWNER may request.

16. Conditions of Work

Each bidder must inform itself fully of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of its obligation to furnish all material and labor necessary to carry out the provisions of its contract. Insofar as possible the CONTRACTOR, in carrying out its work, must employ such methods or means as will not cause any interruption of or interference with the work of any other contractor.

17. Security for Faithful Performance

Simultaneously with its delivery of the executed Contract, the CONTRACTOR shall furnish a surety bond or bonds as security for faithful performance of this Contract and for the payment of all persons performing labor and materials under this Contract as specified in Section 00700, GENERAL CONDITIONS included herein. The surety on such bond or bonds shall be a surety company qualified to do business under the laws of the Commonwealth and satisfactory to the OWNER. The bonds shall remain in force for one year after final acceptance of the work by the OWNER, unless the OWNER, in writing, releases the CONTRACTOR from the obligation sooner.

18. Power of Attorney

Attorneys-in-fact who sign Contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

19. Laws and Regulations

Applicable provisions of Massachusetts General Laws and Regulations and/or the United States Code and Code of Federal Regulations govern this Contract and any provision in violation of the foregoing shall be deemed null, void and of no effect. Where conflict between Code of Federal Regulations and State Laws and Regulations exist, the more stringent requirement shall apply.

The bidder's attention is directed to the fact that all applicable State laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over

construction of the project shall apply to the Contract throughout, and they will be deemed to be included in the Contract the same as though herein written out in full.

Attention is directed to Section 00830 and to other applicable sections of this specification.

20. Liquidated Damages for Failure to Enter into Contract

The successful bidder, upon its failure or refusal to execute and deliver the Contract, Bonds and Certificates of Insurance required within 10 days after receipt of notice of the acceptance of the bid, shall forfeit to the OWNER, as liquidated damages for such failure or refusal, the security deposited with its bid, provided that the amount forfeited shall not exceed the difference between its bid price and the bid price of the next lowest responsible and eligible bidder. In case of death, disability, bonafide clerical or mechanical error of a substantial nature, or other similar unforeseen circumstances affecting the bidder, its bid deposit will be returned.

21. Items and Indeterminate Items

The work to be done under this Contract has been divided into parts or items to enable each bidder to bid on different portions of the work in accordance with its estimate of their cost and so that the actual quantity of work executed under each item may be paid for at the price bid for that particular item, even though each bidder may have judged that such quantity may be greater or less than the estimated quantity stated in Section 00410, FORM OF GENERAL BID.

22. CONTRACTOR Records

The CONTRACTOR shall comply with the provisions of Massachusetts General Laws, Chapter 30, Section 39R, concerning CONTRACTOR records. This section has been reprinted in Section 00830, STATE REGULATIONS.

23. Bidder Certification – OSHA Training

All employees who work on Massachusetts public works construction sites, on projects estimated to cost more than \$10,000, must have no less than ten (10) hours of OSHA-approved safety and health training.

This law directs the Massachusetts Attorney General to restrain award of construction contracts to any contractor who is in violation of this requirement and to restrain the performance of these contracts by non-complying contractors.

Noncompliance with this law will disqualify contractors from bidding on public contracts.

END OF SECTION

SECTION 00310
FORM OF GENERAL BID
(Lump Sum with Adjustment Classes)

Proposal of _____ (hereinafter called "Bidder")*

- ☐ a corporation, organized and existing under the laws of the State of _____
- ☐ a partnership
- ☐ a joint venture
- ☐ a limited liability company
- ☐ an individual doing business as _____

*Check corporation, partnership, joint venture, LLC or individual as applicable.

To the Town of Arlington (hereinafter called "Owner").

Gentlemen:

The Bidder, in compliance with your invitation for bids for construction of the
Reconstruction of the Spy Pond Field Tennis Courts, Sealed Bid Contract
No. 15-03 having examined the plans and specifications with related documents and the site of
the proposed work, and being familiar with all of the conditions surrounding the construction of
the proposed project including the availability of materials and labor, hereby proposes to furnish
all superintendence, labor, services, materials, equipment, plant, machinery, apparatus,
appliances, tools, supplies, bailing, shoring, removal, and all other things necessary to construct
the project in accordance with the contract documents, within the time set forth below, and at the
prices stated below. These prices are to cover all expenses incurred in performing the work
required under the contract documents, of which this bid is a part.

The Bidder hereby agrees that if selected as the Contractor it will commence work under
this contract on or before a date to be fixed in the written "Notice to Proceed" given by the

Owner to the Contractor and to fully complete the project within 150 Consecutive days of the start date fixed in the "Notice to Proceed". The Bidder further agrees to pay as liquidated damages the sum of \$500.00 for each consecutive calendar day thereafter during which the work has not been fully completed, as provided in the "Liquidated Damages" provisions of Section 00800, SUPPLEMENTARY CONDITIONS.

Bidder acknowledges receipt of the following addenda:

No. _____ Dated: _____

No. _____ Dated: _____

No. _____ Dated: _____

No. _____ Dated: _____

A. BASE BID:

Each base bid sub-item must be priced to reasonably reflect the underlying cost to complete that sub-item. The OWNER reserves the right to reject bids that do not reasonably reflect the underlying cost to complete each sub-item, such as bids where each sub-item has an equal price or where material purchase costs exceed the price listed for a sub-item.

Base Bid Lump Sum: All work required to furnish and install all site work for both North Union Spray Park and Hibbert Playground complete and in place.

\$ _____
Lump Sum (Amount Written in Numbers)

\$ _____
Lump Sum (Amount Written in Words)

B. ADD ALTERNATES

The General Bidder is required to provide a Bid for each add alternate listed below. If selected by the OWNER, the alternate will be added to the Total Base Bid. The bid for each add alternate includes the price of the General Bidder and all affected subbidders.

The proposed Add Alternate #1 North Union Spray Park – Furnish and install integral color concrete at spray pad complete and in place:

\$ _____
Amount Written in Numbers

\$ _____
Amount Written in Words

The proposed Add Alternate #2 North Union Spray Park – Furnish and install three (3) spray jets in seat wall complete and in place:

\$ _____
Amount Written in Numbers

\$ _____
Amount Written in Words

The OWNER reserves the right to select the low bid from the Total Base Bid without Add Alternates No. 1 through 4,

C. SUPPLEMENTAL UNIT PRICES

Should certain additional work be required, or should the quantities of certain classes of work be increased or decreased from those on which the Contract Sum is based, by order and approval of the Owner, the undersigned agrees that the following supplemental unit prices may be used as the basis of payment to him/her or credit to the Owner for such addition, increase, or decrease in the work as determined solely by the Owner.

Supplemental unit prices shall cover all costs, complete in place, and the prices given shall represent the exact amount per unit to be paid to the Contractor (in the case of additions or increases) or to be deducted from payments to the Contractor (in the case of deductions or decreases). It is mutually understood and agreed that such Unit Prices include all items of costs, equipment, taxes and insurance of every kind, overhead, and profit for the Contractor and they shall be used uniformly, without modification for additions and deductions. Prices listed under ADDITIONS and DEDUCTIONS are to be the complete total price billed to and paid by the Town therefore. There can be no more than fifteen (15) percent difference in price between the additions and deductions.

Sufficient prior notice shall be given in accordance with the General Conditions so that proper measurements of materials removed or to be replaced may be taken. All quantities used in the determination of additions to or deductions from the Contract Price due to Unit Prices shall only be those that have been determined and approved by the Town in advance.

- A. The unit price bid shall be taken to include all labor and materials necessary to make the item of work complete in place.
- B. In case of substitution of items shown on the Drawings or called for in the Contract Documents, the change to the Contract Price for both item deleted and the item added, if of the same class of work, shall be based on the addition column.

The Bidder understands that all bids for this project are subject to the applicable bidding laws of the Commonwealth of Massachusetts, including General Laws Chapter 30, Section 39M, as amended.

The contract will be awarded to the lowest responsible and eligible bidder.

Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informalities in the bidding.

The Bidder agrees that this bid shall be good and may not be withdrawn for a period of 30 days, Saturdays, Sundays and legal holidays excluded, after the opening of bids.

Within 10 days of receipt of the written notice of acceptance of this bid, the Bidder will execute the formal agreement attached in Section 00520 AGREEMENT.

Bid security is attached in the sum of five percent (5%) of the total bid in accordance with the conditions of Section 00100 INSTRUCTIONS TO BIDDERS. The bid security may become the property of the Owner in the event the contract and bond are not executed within the time set forth above.

The selected Contractor shall furnish a performance bond and a payment bond in an amount at least equal to one hundred percent (100%) of the contract prices in accordance with Section 00501 PERFORMANCE BOND, Section 00502 PAYMENT BOND, and as stipulated in paragraph 5.01 of Section 00700, GENERAL CONDITIONS of these specifications.

The undersigned offers the following information as evidence of its qualifications to perform the work as bid upon according to all the requirements of the plans and specifications.

1. Have been in business under present name for _____ years.

2. The names and addresses of all persons interested in the bid (if made by a partnership or corporation) as Principals, are as follows:

(Attach supplementary list if necessary)

3. The Bidder shall state below what work of a similar character to that included in the proposed contract it has done, and give references that will enable the Owner to judge its experience, skill and business standing (add supplementary page if necessary).

	Completion Date	Project Name	Contract Amount	Design Engineer	Reference Name	Telephone No.
a.						
b.						
c.						
d.						
e.						
f.						

Pursuant to M.G.L. CH. 62C, Sec 49A, the undersigned Bidder certifies under the penalties of perjury that it is in compliance with all laws of the Commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

The undersigned Bidder hereby certifies it will comply with the minority workforce percentage ratio and specific affirmative action steps contained in the EEO/AA provisions of this Contract, including compliance with the Disadvantaged Business Enterprise as required under these contract provisions. The contractor receiving the award of the contract shall be required to obtain from each of its subcontractors a copy of the certification by said subcontractor, regardless of tier, that it will comply with the minority workforce ratio and specific affirmative action steps contained in these EEO/AA contract provisions prior to the award of such subcontract.

The undersigned Bidder hereby certifies that (1) it is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work; (2) that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and 3) that all employees to be employed in the work subject to this bid have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration.

The undersigned certifies under penalties of perjury that this bid is in all respects bona fide, fair and made without collusion or fraud with any other person. As used in this paragraph the word "person" shall mean any natural person, joint venture, partnership, corporation or other business or legal entity which sells materials, equipment or supplies used in or for, or engages in the performance of, the same or similar construction, reconstruction, installation, demolition, maintenance or repair work or any part thereof..

The undersigned further certifies under penalty of perjury that the said undersigned is not presently debarred from doing public construction work in the Commonwealth of Massachusetts under the provisions of Section Twenty-Nine F of Chapter Twenty-Nine, Section 25C (10) of Chapter 152 (workers' compensation) or any other applicable debarment provisions of any other Chapter of the General Laws or any rule or regulations promulgated thereunder **(add the following for federally or SRF funded projects) ; and is not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency.**

Bidders must fully comply with Subpart C of 2 CFR Part 180 and 2 CFR Part1532, entitled Responsibilities of Participants Regarding Transactions (Doing Business with Other Persons). Contractors, subcontractors, or suppliers that appear on the Excluded Parties List System at www.epls.gov are not eligible for award of any contracts funded by the Massachusetts State Revolving Fund.

Respectfully submitted:

Date _____

By _____
(Signature)

(Name - Typed or Printed)

(Title)

(SEAL - if bid is by a corporation)

(Business Name)

(Federal ID Number)

(Business Address)

(City and State)

(Telephone Number)

Document4

UNIT PRICES

1. Should certain additional work be required, or should the quantities of certain classes of work be increased or decreased from those required by the Contract Documents, by authorization of the Town, unit prices shall at the option of the Town be the basis of payment to the Contractor or credit to the Town, for such increase or decrease in the work. The unit prices shall represent the exact net amount per unit to be paid by the Contractor (in the case of addition or increase) or to be refunded the Town (in the case of decrease). No additional adjustment will be allowed for overhead, profit, insurance or other direct or indirect expenses of the Contractor or Subcontractors.
2. The unit prices shall include all labor, materials, installation shipping, overhead, profit, insurance, etc. to cover the finished work of the several kinds called for. Changes shall be processed in accordance with the provisions of the General Conditions governing changes in the work.

		ADD	DEDUCT
a.	Interceptor Trench Drain, complete system	\$ _____lf	\$ _____lf
b.	Saw cutpavement and patching	\$ _____sf	\$ _____sf
c.	Bituminous concrete paving, complete in place, including base and subbase prep.	\$ _____sf	\$ _____sf
d.	Dense graded crushed stone, furnished in place and compacted to maximum dry density as specified.	\$ _____cy	\$ _____cy
e.	Graded drainage gravel, furnished and installed.	\$ _____cy	\$ _____cy
f.	Individual Cul-Tec chamber, furnished and installed	\$ _____ea	\$ _____ea
g.	Drain pipe, furnished and installed not including trenching	\$ _____lf	\$ _____lf
h.	10' vinyl clad chain link fence system, furnished and installed	\$ _____lf	\$ _____lf
i.	6' vinyl clad chain link fence system, furnished and installed	\$ _____lf	\$ _____lf
j.	Color Coating of Bit. Conc. paving:	\$ _____sf	\$ _____sf
k.	Gate in 10' fencing system, including posts, furnished and installed	\$ _____ea	\$ _____ea

- | | | | |
|----|--|-----------|------------|
| l. | Standard bench with back,
furnished and installed | \$_____ea | \$ _____ea |
| m. | Topsoil, furnished and spread in place
including grading and compaction | \$_____cy | \$ _____cy |
| n. | Fine-grade, prep and seed lawn area: | \$_____sf | \$ _____sf |
| p. | Provide itemized plant list, with cost for each type of plant, furnished, installed, and
guaranteed, one price for add or deduct. | | |

END OF SECTION

SECTION 00500

AGREEMENT

THIS AGREEMENT, made this _____ day of _____, _____, by and between the party of the first part, the Town of Arlington, Massachusetts hereinafter called "OWNER," acting herein through its Town Manager, and the party of the second part, _____ doing business as (a corporation) (a limited liability company) (a partnership) (a joint venture) (an individual)* located in the (City) (Town)* of _____, County of _____, and State of _____, hereinafter called "CONTRACTOR."

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by the OWNER, the CONTRACTOR hereby agrees with the OWNER to commence and complete the project described as follows:

RECONSTRUCTION OF SPY POND FIELD TENNIS COURTS

hereinafter called the project, for the sum of _____ Dollars and _____ Cents (\$ _____) and all extra work in connection therewith, under the terms as stated in the General and Supplementary Conditions; and at its own proper cost and expense to furnish superintendence, labor, services, materials, equipment, plant, machinery, apparatus, appliances, tools, supplies, bailing, shoring, removal, and all other things necessary to complete the said project in accordance with the conditions and prices stated in Section 00310, FORM OF GENERAL BID, Section 00700, GENERAL CONDITIONS, Section 00800, SUPPLEMENTARY CONDITIONS, Section 00830, STATE REGULATIONS, the plans, which include all maps, plates, blue prints, and the specifications and contract documents therefore as prepared by Weston & Sampson Engineers, Inc.

The CONTRACTOR hereby agrees to commence work under this contract on or before a date to be fixed in the written Notice to Proceed given by the OWNER to the CONTRACTOR and to fully complete the project within 150 calendar days from the

start date fixed in the Notice to Proceed. The Contractor shall complete re-test inspection within 21 consecutive calendar days of commencement of re-test inspection. The CONTRACTOR further agrees to pay as liquidated damages the sum of \$ 1,150 for each consecutive calendar day thereafter during which the work has not been fully completed, as provided in the Liquidated Damages paragraph of Section 00800 SUPPLEMENTARY CONDITIONS.

Minority Business Enterprise (MBE) and Women's Business Enterprise (WBE) policies of the Town of Arlington are applicable to this Contract. The goals for this project are:

Section 1. Women Work Force Participation

Any Town board or official in charge of a construction or reconstruction project is required to include in the contract documents the following:

- A.** Contractor shall maintain as a goal on this project a not less than five percent ratio of women work force to total project hours in both the general contract and each individual filed sub-bid contract, if applicable. The preceding sentence shall be included in all construction contracts whether entered into by the Town pursuant to the provisions of M.G.L. c. 149 or M.G. L. c 30, §39M et. seq. provided however, that if entered into under Chapter 30 same shall not be deemed to apply where the projected bid price as determined by the Director of Public Works is not likely to exceed \$200,000.
- B.** A Labor Scheduling Table which will be used as a tool for achieving a range of women work force participation for the entire project in both the general contract and each individual filed sub-bid contract.

Section 2. Equal Opportunity Goal Compliance

Any Town board or official in charge of a construction or reconstruction project is required to include in the contract documents the following:

- A.** Before starting work, the contractors (includes the general contractor, for itself and its subcontractors, as well as all filed sub-bid contractors, if applicable) will submit plans for achievement of the equal opportunity goals of the contract. All contractors will be required to make a good faith effort to achieve these goals. The plan will indicate if the contractors expect to achieve the requirements during the first quarter. If there are reasons why the contractors do not expect to achieve the requirements during the first quarter year of the contract construction phase, then the contractors shall provide a plan calculated to address, to the extent reasonably possibly, these obstacles to a good faith effort to achieve such goals.
- B.** Not more than ten days following the end of each work quarter, the contractors will report on the achievement of the goals, detailing the good faith efforts that have been made and will continue to be made and any other appropriate efforts not yet undertaken.
- C.** All reports will be signed by an officer or principal of the company who has the authority to contractually obligate the company.

Section 3. Recruitment and Training

Any board, officer, committee, or other agency of the Town, which acts on behalf of the Town in

making or supervising any contract, in an amount exceeding the sum of \$100,000 for the purchase of goods or services or for the construction, renovation, or repair of buildings or other improvement of real estate, may make arrangements with contractors and other interested agencies for special programs of recruitment and training in connection with the work to be performed on such contract, with the objective of promoting equal employment opportunity for members of minority groups protected by the fair employment laws of the Commonwealth and the United States. Any board, officer, committee or other Town agency may expend Town funds in carrying them out provided that appropriations specifically designed for such purposes have been voted by the Town Meeting. The CONTRACTOR shall take all affirmative steps necessary to achieve this goal, and shall provide reports documenting the portion of contract and subcontract dollars paid to minority and women-owned businesses, and its effort to achieve the goals, with each invoice submitted or at such greater intervals as specified by the municipality. The CONTRACTOR shall require similar reports from its subcontractors.

The CONTRACTOR shall not discriminate against or exclude any person from participation herein on grounds of race, color, religious creed, national origin, sex, sexual orientation, ancestry, or age; and that it shall take affirmative actions to insure that applicants are employed, and that employees are treated during their employment, without regard to race, color, religious creed, national origin, sex, sexual orientation, ancestry, age, or handicapped status.

The CONTRACTOR shall not participate in or cooperate with an international boycott, as defined in Section 999 (b)(3) and (4) of the Internal Revenue Code of 1986, as amended, or engage in conduct declared to be unlawful by Section 2 of Chapter 151E of the Massachusetts General Laws.

Applicable provisions of Massachusetts General Laws and Regulations and/or the United States Code and Code of Federal Regulations govern this Agreement and any provision in violation of the foregoing shall be deemed null, void and of no effect. Where conflict between Code of Federal Regulations and State laws and Regulations exist, the more stringent requirement shall apply.

Subject to G.L. c.149, sec. 39K and/or sec. 39G and G.L. c.30, sec. 39F, as applicable, the OWNER agrees to pay the CONTRACTOR in current funds for the performance of the Agreement, subject to additions and deductions, as provided in Section 00700, GENERAL CONDITIONS, and to make payments on account thereof as provided in Section 00700, GENERAL CONDITIONS.

IN WITNESS WHEREOF, the parties to these presents have executed this Agreement in six (6) counterparts, each of which shall be deemed an original, in the year and day first above mentioned.

AGREED:

Town of Arlington , Massachusetts
(Owner)

By _____

Adam W. Chapdelaine
(Name)

Town Manager
(Title)

(Contractor)

By _____

(Name)

(Title)

(Address)

(City and State)

Approved as to Form:

By _____
(Owner's Counsel)

(Name)

In accordance with M.G.L. C.44, Section 31C, this is to certify that an appropriation in the amount of this Contract is available therefor and that the Town of Arlington has been authorized to execute the Contract and approve all requisitions and change orders.

By _____
(Owner's Accountant)

(Name)

CERTIFICATE OF VOTE
(to be filed if Contractor is a Corporation)

I, _____, hereby certify that I am the duly qualified and acting Secretary of
(Secretary of Corporation)
_____ and I further certify that a meeting of the Directors of said company,
(Name of Corporation)
duly called and held on _____, at which all members were present and voting, the
(Date of Meeting)
following vote was unanimously passed:

VOTED: To authorize and empower

Anyone acting singly, to execute Forms of General Bid, Contracts or Bonds on behalf of the Corporation.

I further certify that the above vote is still in effect and has not been changed or modified in any respect.

By: _____
(Secretary of Corporation)

A True Copy:

Attest: _____
(Notary Public)

My Commission Expires: _____
(Date)

Contractor's Certification

A Contractor will not be eligible for award of a contract unless such Contractor has submitted the following certification, which is deemed a part of the resulting contract:

CONTRACTOR'S CERTIFICATION

Name of the General Contractor

certifies that it:

1. Will not discriminate in their employment practices;
2. Intends to use the following listed construction trades in the work under the contract:

and

3. Will make good faith efforts to comply with the minority employee and women employee workforce participation ratio goals and specific affirmative action steps contained herein; and
4. Is in compliance with all applicable federal and state laws, rules, and regulations governing fair labor and employment practices; and
5. Will provide the provisions of the "Supplemental Equal Employment Opportunity, Non-Discrimination and Affirmative Action Program" to each and every subcontractor employed on the Project and will incorporate the terms of this Section into all subcontracts and work orders entered into on the Project.
6. Agrees to comply with all provisions contained herein.

Signature of authorized representative of Contractor

Date

Printed name of authorized representative of Contractor

Subcontractor's Certification

Prior to the award of any subcontract, regardless of tier, the prospective subcontractor must execute and submit to the General Contractor the following certification, which will be deemed a part of the resulting subcontract:

SUBCONTRACTOR'S CERTIFICATION

Name of the Subcontractor

certifies that it:

7. Will not discriminate in their employment practices;
8. Intends to use the following listed construction trades in the work under the contract:

and

9. Will make good faith efforts to comply with the minority employee and women employee workforce participation ratio goals and specific affirmative action steps contained herein; and
10. Is in compliance with all applicable federal and state laws, rules, and regulations governing fair labor and employment practices; and
11. Will provide the provisions of the "Supplemental Equal Employment Opportunity, Non-Discrimination and Affirmative Action Program" to each and every subcontractor employed on the Project and will incorporate the terms of this Section into all subcontracts and work orders entered into on the Project.
12. Agrees to comply with all provisions contained herein.

Signature of authorized representative of Subcontractor

Date

Printed name of authorized representative of Subcontractor

END OF SECTION

SECTION 00501

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: That we _____
(Name of Contractor)

a _____ hereinafter called "Principal" and
(Corporation, Partnership, Joint Venture, Limited Liability Company, or Individual)

_____ of _____, State of _____
(Surety) (City) (State)

hereinafter called the "Surety" and licensed by the State Division of Insurance to do business under the laws of the Commonwealth of Massachusetts are held and firmly bound to the Town of Arlington, Massachusetts, hereinafter called "Owner," in the penal sum of _____

_____ Dollars and _____
_____ Cents (\$_____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that Whereas, the Principal entered into a certain contract with the Owner, dated the _____ day of _____, _____, a copy of which is hereto attached and made a part hereof for the construction described as follows:

RECONSTRUCTION OF SPY POND FIELD TENNIS COURTS

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the Owner, with or without notice to the Surety, and if he shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the Owner from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the Owner all outlay and expense which the Owner may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of this contract or to the work or to the specifications. The Surety Company providing the bond shall have a rating of A or better within the Best Key Rating Guide.

PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in six (6) counterparts, each one of which shall be deemed an original, this the _____ day of _____, _____.

ATTEST:

(Principal)

(Principal Secretary)

By _____

(Address-Zip Code)

(Witness as to Principal)

(Address-Zip Code)

(SEAL)

ATTEST:

(Surety)

By _____
(Attorney-in-Fact)

(Address-Zip Code)

Witness as to Surety

(Address-Zip Code)

(SEAL)

NOTE: If Contractor is a partnership, all partners should execute bond.

SECTION 00502

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: That we _____
(Name of Contractor)
a _____ hereinafter called "Principal"
and _____ (Corporation, Partnership, Joint Venture, Limited Liability Company, or Individual)
_____ of _____, State of _____
(Surety) (City) (State)
hereinafter called "Surety" and licensed by the State Division of Insurance to do business under
the laws of the Commonwealth of Massachusetts are held and firmly bound to the Town of
Arlington, Massachusetts, hereinafter called "Owner," in the penal sum of _____
Dollars and _____
Cents (\$_____) in lawful money of the United States, for the
payment of which sum well and truly to be made, we bind ourselves, our heirs, executors,
administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that Whereas, the Principal entered
into a certain contract with the Owner, dated the _____ day of _____,
, a copy of which is hereto attached and made a part hereof for the construction described as
follows:

IMPROVEMENTS TO NORTH UNION SPRAY PARK & HIBBERT PLAYGROUND

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms,
subcontractors, and corporations furnishing materials for or performing labor in the prosecution
of the work provided for in such contract, and any authorized extension or modification thereof,
including all amounts due for materials, lubricants, oil, gasoline, repairs on machinery,
equipment and tools, consumed or used in connection with the construction of such work, and all
insurance premiums on said work, and for all labor, performed in such work whether by
subcontractor or otherwise, then this obligation shall be void; otherwise to remain in full force
and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and
agrees that no change, extension of time, alteration or addition to the terms of the contract or to
the work to be performed thereunder or the specifications accompanying the same shall in any
way affect its obligation on this bond, and it does hereby waive notice of any such change,
extension of time, alteration or addition to the terms of this contract or to the work or to the
specifications. The Surety Company providing the bond shall have a rating of A or better within
the Best Key Rating Guide.

PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor
shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in six (6) counterparts, each one of which shall be deemed an original, this the _____ day of _____, _____.

ATTEST:

(Principal)

(Principal Secretary)

By _____

(Address-Zip Code)

(Witness as to Principal)

(Address-Zip Code)

(SEAL)

ATTEST:

(Surety)

By _____

(Attorney-in-Fact)

(Address-Zip Code)

(Witness as to Surety)

(SEAL)

(Address-Zip Code)

NOTE: If Contractor is a partnership, all partners should execute bond.

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the Controlling Law.

STANDARD
GENERAL CONDITIONS
OF THE
CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly By

PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE
a practice division of the
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

AMERICAN CONSULTING ENGINEERS COUNCIL

AMERICAN SOCIETY OF CIVIL ENGINEERS

This document has been approved and endorsed by

The Associated General

Contractors of America

Construction Specifications Institute

These General Conditions have been prepared for use with the Owner-Contractor Agreements (No. 1910-8-A-1 or 1910-8-A-2) (1996 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the EJCDC User's Guide (No. 1910-50). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (No. 1910-17) (1996 Edition).

Copyright ©1996

National Society of Professional Engineers
1420 King Street, Alexandria, VA 22314

American Consulting Engineers Council
1015 15th Street N.W., Washington, DC 20005

American Society of Civil Engineers
345 East 47th Street, New York, NY 10017

TABLE OF CONTENTS

	<u>Page</u>
ARTICLE 1 - DEFINITIONS AND TERMINOLOGY	6
1.01 Defined Terms	6
1.02 Terminology	8
ARTICLE 2 - PRELIMINARY MATTERS	9
2.01 Delivery of Bonds	9
2.02 Copies of Documents	9
2.03 Commencement of Contract Times; Notice to Proceed.....	9
2.04 Starting the Work	9
2.05 Before Starting Construction.....	9
2.06 Preconstruction Conference	9
2.07 Initial Acceptance of Schedules	9
ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE	10
3.01 Intent	10
3.02 Reference Standards	10
3.03 Reporting and Resolving Discrepancies	10
3.04 Amending and Supplementing Contract Documents	11
3.05 Reuse of Documents.....	11
ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; REFERENCE POINTS	11
4.01 Availability of Lands.....	11
4.02 Subsurface and Physical Conditions.....	11
4.03 Differing Subsurface or Physical Conditions	11
4.04 Underground Facilities.....	12
4.05 Reference Points.....	13
4.06 Hazardous Environmental Condition at Site	13
ARTICLE 5 - BONDS AND INSURANCE	14
5.01 Performance, Payment, and Other Bonds.....	14
5.02 Licensed Sureties and Insurers.....	14
5.03 Certificates of Insurance.....	14
5.04 Contractor's Liability Insurance	15
5.05 Owner's Liability Insurance.....	15
5.06 Property Insurance.....	15
5.07 Waiver of Rights	16
5.08 Receipt and Application of Insurance Proceeds	17
5.09 Acceptance of Bonds and Insurance; Option to Replace	17
5.10 Partial Utilization, Acknowledgment of Property Insurer.....	17
ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES	17
6.01 Supervision and Superintendence	17
6.02 Labor; Working Hours	18
6.03 Services, Materials, and Equipment.....	18
6.04 Progress Schedule.....	18
6.05 Substitutes and "Or-Equals"	18
6.06 Concerning Subcontractors, Suppliers, and Others	19
6.07 Patent Fees and Royalties.....	20
6.08 Permits	20
6.09 Laws and Regulations	20
6.10 Taxes	21
6.11 Use of Site and Other Areas.....	21
6.12 Record Documents	21
6.13 Safety and Protection.....	21
6.14 Safety Representative	22
6.15 Hazard Communication Programs	22

6.16	Emergencies	22
6.17	Shop Drawings and Samples.....	22
6.18	Continuing the Work	23
6.19	Contractor's General Warranty and Guarantee	23
6.20	Indemnification.....	24
ARTICLE 7 -	OTHER WORK	24
7.01	Related Work at Site.....	24
7.02	Coordination	25
ARTICLE 8 -	OWNER'S RESPONSIBILITIES	25
8.01	Communications to Contractor	25
8.02	Replacement of Engineer	25
8.03	Furnish Data	25
8.04	Pay Promptly When Due.....	25
8.05	Lands and Easements; Reports and Tests	25
8.06	Insurance.....	25
8.07	Change Orders	25
8.08	Inspections, Tests, and Approvals.....	25
8.09	Limitations On OWNER's Responsibilities	25
8.10	Undisclosed Hazardous Environmental Condition	25
8.11	Evidence of Financial Arrangements	25
ARTICLE 9 -	ENGINEER'S STATUS DURING CONSTRUCTION	26
9.01	Owner's Representative	26
9.02	Visits to Site.....	26
9.03	Project Representative	26
9.04	Clarifications and Interpretations	26
9.05	Authorized Variations in Work	26
9.06	Rejecting Defective Work.....	26
9.07	Shop Drawings, Change Orders and Payments	26
9.08	Determinations for Unit Price Work.....	26
9.09	Decisions on Requirements of Contract Documents and Acceptability of Work	27
9.10	Limitations on Engineer's Authority and Responsibilities	27
ARTICLE 10 -	CHANGES IN THE WORK; CLAIMS	27
10.01	Authorized Changes in the Work	27
10.02	Unauthorized Changes in the Work	27
10.03	Execution of Change Orders.....	27
10.04	Notification to Surety.....	28
10.05	Claims and Disputes	28
ARTICLE 11 -	COST OF THE WORK; CASH ALLOWANCES; UNIT PRICE WORK.....	29
11.01	Cost of the Work	29
11.02	Cash Allowances.....	30
11.03	Unit Price Work	30
ARTICLE 12 -	CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES	31
12.01	Change of Contract Price.....	31
12.02	Change of Contract Times	32
12.03	Delays Beyond Contractor's Control	32
12.04	Delays Within Contractor's Control.....	32
12.05	Delays Beyond Owner's And Contractor's Control	32
12.06	Delay Damages	32
ARTICLE 13 -	TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK.....	32
13.01	Notice of Defects	32
13.02	Access to Work	32
13.03	Tests and Inspections	32
13.04	Uncovering Work	33

13.05	Owner May Stop the Work.....	33
13.06	Correction or Removal of Defective Work.....	33
13.07	Correction Period.....	33
13.08	Acceptance of Defective Work	34
13.09	Owner May Correct Defective Work	34
ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION.....		34
14.01	Schedule of Values	34
14.02	Progress Payments	34
14.03	Contractor's Warranty of Title	36
14.04	Substantial Completion.....	36
14.05	Partial Utilization.....	37
14.06	Final Inspection.....	37
14.07	Final Payment	37
14.08	Final Completion Delayed.....	38
14.09	Waiver of Claims	38
ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION		38
15.01	Owner May Suspend Work	38
15.02	Owner May Terminate For Cause	38
15.03	Owner May Terminate For Convenience.....	39
15.04	Contractor May Stop Work or Terminate	39
ARTICLE 16 - DISPUTE RESOLUTION.....		39
16.01	Methods and Procedures.....	39
ARTICLE 17 - MISCELLANEOUS		39
17.01	Giving Notice.....	39
17.02	Computation of Times	39
17.03	Cumulative Remedies.....	39
17.04	Survival of Obligations	39
17.05	Controlling Law	40

GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

1.01 Defined Terms

A. Wherever used in the Contract Documents and printed with initial or all capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof.

1. *Addenda*--Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the Contract Documents.

2. *Agreement*--The written instrument which is evidence of the agreement between OWNER and CONTRACTOR covering the Work.

3. *Application for Payment*--The form acceptable to ENGINEER which is to be used by CONTRACTOR during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Asbestos*--Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

5. *Bid*--The offer or proposal of a bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

6. *Bidding Documents*--The Bidding Requirements and the proposed Contract Documents (including all Addenda issued prior to receipt of Bids).

7. *Bidding Requirements*--The Advertisement or Invitation to Bid, Instructions to Bidders, Bid security form, if any, and the Bid form with any supplements.

8. *Bonds*--Performance and payment bonds and other instruments of security.

9. *Change Order*--A document recommended by ENGINEER which is signed by CONTRACTOR and OWNER and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

10. *Claim*--A demand or assertion by OWNER or CONTRACTOR seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. *Contract*--The entire and integrated written agreement between the OWNER and CONTRACTOR concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

* 12. *Contract Documents*--The Contract Documents establish the rights and obligations of the parties and include the Agreement, Addenda (which pertain to the Contract Documents), CONTRACTOR's Bid (including documentation accompanying the Bid and any post Bid documentation submitted prior to the Notice of Award) when attached as an exhibit to the Agreement, the Notice to Proceed, the Bonds, these General Conditions, the Supplementary Conditions, the Specifications and the Drawings as the same are more specifically identified in the Agreement, together with all Written Amendments, Change Orders, Work Change Directives, Field Orders, and ENGINEER's written interpretations and clarifications issued on or after the Effective Date of the Agreement. Approved Shop Drawings and the reports and drawings of subsurface and physical conditions are not Contract Documents. Only printed or hard copies of the items listed in this paragraph are Contract Documents. Files in electronic media format of text, data, graphics, and the like that may be furnished by OWNER to CONTRACTOR are not Contract Documents.

13. *Contract Price*--The moneys payable by OWNER to CONTRACTOR for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of paragraph 11.03 in the case of Unit Price Work).

14. *Contract Times*--The number of days or the dates stated in the Agreement to: (i) achieve Substantial Completion; and (ii) complete the Work so that it is ready for final payment as evidenced by ENGINEER's written recommendation of final payment.

15. *CONTRACTOR*--The individual or entity with whom OWNER has entered into the Agreement.

16. *Cost of the Work*--See paragraph 11.01.A for definition.

17. *Drawings*--That part of the Contract Documents prepared or approved by ENGINEER which graphically shows the scope, extent, and character of the Work to be performed by CONTRACTOR. Shop Drawings and other CONTRACTOR submittals are not Drawings as so defined.

18. *Effective Date of the Agreement*--The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which

the Agreement is signed and delivered by the last of the two parties to sign and deliver.

* 19. *ENGINEER*--The individual or entity named as such in the Agreement.

* 20. *ENGINEER's Consultant*--An individual or entity having a contract with ENGINEER to furnish services as ENGINEER's independent professional associate or consultant with respect to the Project and who is identified as such in the Supplementary Conditions.

21. *Field Order*--A written order issued by ENGINEER which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.

22. *General Requirements*--Sections of Division 1 of the Specifications. The General Requirements pertain to all sections of the Specifications.

23. *Hazardous Environmental Condition*--The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.

24. *Hazardous Waste*--The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

25. *Laws and Regulations; Laws or Regulations*--Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

26. *Liens*--Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

27. *Milestone*--A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

28. *Notice of Award*--The written notice by OWNER to the apparent successful bidder stating that upon timely compliance by the apparent successful bidder with the conditions precedent listed therein, OWNER will sign and deliver the Agreement.

29. *Notice to Proceed*--A written notice given by OWNER to CONTRACTOR fixing the date on which the Contract Times will commence to run and on which CONTRACTOR shall start to perform the Work under the Contract Documents.

** 30. *OWNER*--The individual, entity, public body, or authority with whom CONTRACTOR has entered into the Agreement and for whom the Work is to be performed.

31. *Partial Utilization*--Use by OWNER of a substantially completed part of the Work for the purpose for which it is intended (or a related purpose) prior to Substantial Completion of all the Work.

32. *PCBs*--Polychlorinated biphenyls.

33. *Petroleum*--Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

34. *Project*--The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part as may be indicated elsewhere in the Contract Documents.

35. *Project Manual*--The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

36. *Radioactive Material*--Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

37. *Resident Project Representative*--The authorized representative of ENGINEER who may be assigned to the Site or any part thereof.

38. *Samples*--Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

39. *Shop Drawings*--All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for CONTRACTOR and submitted by CONTRACTOR to illustrate some portion of the Work.

40. *Site*--Lands or areas indicated in the Contract Documents as being furnished by OWNER upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by OWNER which are designated for the use of CONTRACTOR.

* ~~41. *Specifications*--That part of the Contract Documents consisting of written technical descriptions of materials, equipment, systems, standards, and workmanship as applied to the Work and certain administrative details applicable thereto.~~

42. *Subcontractor*--An individual or entity having a direct contract with CONTRACTOR or with any other Subcontractor for the performance of a part of the Work at the Site.

****** 43. *Substantial Completion*--The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of ENGINEER, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

44. *Supplementary Conditions*--That part of the Contract Documents which amends or supplements these General Conditions.

45. *Supplier*--A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with CONTRACTOR or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by CONTRACTOR or any Subcontractor.

46. *Underground Facilities*--All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

47. *Unit Price Work*--Work to be paid for on the basis of unit prices.

48. *Work*--The entire completed construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

49. *Work Change Directive*--A written statement to CONTRACTOR issued on or after the Effective Date of the Agreement and signed by OWNER and recommended by ENGINEER ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

50. *Written Amendment*--A written statement modifying the Contract Documents, signed by OWNER and CONTRACTOR on or after the Effective Date of the Agreement and normally dealing with the nonengineering or nontechnical rather than strictly construction-related aspects of the Contract Documents.

1.02 Terminology

A. *Intent of Certain Terms or Adjectives*

1. Whenever in the Contract Documents the terms "as allowed," "as approved," or terms of like effect or import are used, or the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of ENGINEER as to the Work, it is intended that such action or determination will be solely to evaluate, in general, the completed Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective shall not be effective to assign to ENGINEER any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 9.10 or any other provision of the Contract Documents.

B. *Day*

1. The word "day" shall constitute a calendar day of 24 hours measured from midnight to the next midnight.

C. *Defective*

1. The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it does not conform to the Contract Documents or does not meet the requirements of any inspection, reference standard, test, or approval referred to in the Contract Documents, or has been damaged prior to ENGINEER's recommendation of final payment (unless responsibility for the protection thereof has been assumed by OWNER at Substantial Completion in accordance with paragraph 14.04 or 14.05).

D. *Furnish, Install, Perform, Provide*

1. The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words "perform" or "provide," when used in connection with services, materials, or

equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

4. When “furnish,” “install,” “perform,” or “provide” is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of CONTRACTOR, “provide” is implied.

E. Unless stated otherwise in the Contract Documents, words or phrases which have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 - PRELIMINARY MATTERS

2.01 Delivery of Bonds

A. When CONTRACTOR delivers the executed Agreements to OWNER, CONTRACTOR shall also deliver to OWNER such Bonds as CONTRACTOR may be required to furnish.

2.02 Copies of Documents

A. OWNER shall furnish to CONTRACTOR up to ten copies of the Contract Documents. Additional copies will be furnished upon request at the cost of reproduction.

2.03 Commencement of Contract Times; Notice to Proceed *

A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.04 Starting the Work

A. CONTRACTOR shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 Before Starting Construction

A. *CONTRACTOR's Review of Contract Documents:* Before undertaking each part of the Work, CONTRACTOR shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. CONTRACTOR shall promptly report in writing to ENGINEER any conflict, error, ambiguity, or discrepancy which CONTRACTOR may discover and shall obtain a written interpretation or clarification from ENGINEER before proceeding with any

Work affected thereby; however, CONTRACTOR shall not be liable to OWNER or ENGINEER for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless CONTRACTOR knew or reasonably should have known thereof.

B. *Preliminary Schedules:* Within ten days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), CONTRACTOR shall submit to ENGINEER for its timely review:

1. a preliminary progress schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;

2. a preliminary schedule of Shop Drawing and Sample submittals which will list each required submittal and the times for submitting, reviewing, and processing such submittal; and

3. a preliminary schedule of values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

~~* C. *Evidence of Insurance:* Before any Work at the Site is started, CONTRACTOR and OWNER shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which CONTRACTOR and OWNER respectively are required to purchase and maintain in accordance with Article 5.~~

2.06 Preconstruction Conference

A. Within 20 days after the Contract Times start to run, but before any Work at the Site is started, a conference attended by CONTRACTOR, ENGINEER, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in paragraph 2.05.B, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

2.07 Initial Acceptance of Schedules

A. Unless otherwise provided in the Contract Documents, at least ten days before submission of the first Application for Payment a conference attended by CONTRACTOR, ENGINEER, and others as appropriate will be held to review for acceptability to ENGINEER as provided below the schedules submitted in accordance with paragraph 2.05.B. CONTRACTOR shall have an additional

ten days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to CONTRACTOR until acceptable schedules are submitted to ENGINEER.

1. The progress schedule will be acceptable to ENGINEER if it provides an orderly progression of the Work to completion within any specified Milestones and the Contract Times. Such acceptance will not impose on ENGINEER responsibility for the progress schedule, for sequencing, scheduling, or progress of the Work nor interfere with or relieve CONTRACTOR from CONTRACTOR's full responsibility therefor.

2. CONTRACTOR's schedule of Shop Drawing and Sample submittals will be acceptable to ENGINEER if it provides a workable arrangement for reviewing and processing the required submittals.

3. CONTRACTOR's schedule of values will be acceptable to ENGINEER as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 Intent

* A. The Contract Documents are complementary; what is called for by one is as binding as if called for by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided whether or not specifically called for at no additional cost to OWNER.

C. Clarifications and interpretations of the Contract Documents shall be issued by ENGINEER as provided in Article 9.

3.02 Reference Standards

A. *Standards, Specifications, Codes, Laws, and Regulations*

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be

otherwise specifically stated in the Contract Documents.

2. No provision of any such standard, specification, manual or code, or any instruction of a Supplier shall be effective to change the duties or responsibilities of OWNER, CONTRACTOR, or ENGINEER, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents, nor shall any such provision or instruction be effective to assign to OWNER, ENGINEER, or any of ENGINEER's Consultants, agents, or employees any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 Reporting and Resolving Discrepancies

A. *Reporting Discrepancies*

1. If, during the performance of the Work, CONTRACTOR discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, CONTRACTOR shall report it to ENGINEER in writing at once. CONTRACTOR shall not proceed with the Work affected thereby (except in an emergency as required by paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in paragraph 3.04; provided, however, that CONTRACTOR shall not be liable to OWNER or ENGINEER for failure to report any such conflict, error, ambiguity, or discrepancy unless CONTRACTOR knew or reasonably should have known thereof.

B. *Resolving Discrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

a. the provisions of any standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 Amending and Supplementing Contract Documents

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof in one or more of the following ways: (i) a Written Amendment; (ii) a Change Order; or (iii) a Work Change Directive.

B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways: (i) a Field Order; (ii) ENGINEER's approval of a Shop Drawing or Sample; or (iii) ENGINEER's written interpretation or clarification.

3.05 Reuse of Documents

A. CONTRACTOR and any Subcontractor or Supplier or other individual or entity performing or furnishing any of the Work under a direct or indirect contract with OWNER: (i) shall not have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of ENGINEER or ENGINEER's Consultant, including electronic media editions; and (ii) shall not reuse any of such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of OWNER and ENGINEER and specific written verification or adaption by ENGINEER. This prohibition will survive final payment, completion, and acceptance of the Work, or termination or completion of the Contract. Nothing herein shall preclude CONTRACTOR from retaining copies of the Contract Documents for record purposes.

ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; REFERENCE POINTS

4.01 Availability of Lands

A. OWNER shall furnish the Site. OWNER shall notify CONTRACTOR of any encumbrances or restrictions not of general application but specifically related to use of the Site with which CONTRACTOR must comply in performing the Work. OWNER will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If CONTRACTOR and OWNER are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in OWNER's furnishing the Site, CONTRACTOR may make a Claim therefor as provided in paragraph 10.05.

B. Upon reasonable written request, OWNER shall furnish CONTRACTOR with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and OWNER's interest therein as necessary for giving notice of or filing a mechanic's or

construction lien against such lands in accordance with applicable Laws and Regulations.

C. CONTRACTOR shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 Subsurface and Physical Conditions

* A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports of explorations and tests of subsurface conditions at or contiguous to the Site that ENGINEER has used in preparing the Contract Documents; and

2. those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that ENGINEER has used in preparing the Contract Documents.

B. *Limited Reliance by CONTRACTOR on Technical Data Authorized:* CONTRACTOR may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," CONTRACTOR may not rely upon or make any Claim against OWNER, ENGINEER, or any of ENGINEER's Consultants with respect to:

1. the completeness of such reports and drawings for CONTRACTOR's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by CONTRACTOR, and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any CONTRACTOR interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 Differing Subsurface or Physical Conditions

A. *Notice:* If CONTRACTOR believes that any subsurface or physical condition at or contiguous to the Site that is uncovered or revealed either:

1. is of such a nature as to establish that any "technical data" on which CONTRACTOR is entitled to rely as provided in paragraph 4.02 is materially inaccurate; or

2. is of such a nature as to require a change in the Contract Documents; or

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then CONTRACTOR shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by paragraph 6.16.A), notify OWNER and ENGINEER in writing about such condition. CONTRACTOR shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *ENGINEER's Review:* After receipt of written notice as required by paragraph 4.03.A, ENGINEER will promptly review the pertinent condition, determine the necessity of OWNER's obtaining additional exploration or tests with respect thereto, and advise OWNER in writing (with a copy to CONTRACTOR) of ENGINEER's findings and conclusions.

C. *Possible Price and Times Adjustments*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in CONTRACTOR's cost of, or time required for, performance of the Work; subject, however, to the following:

a. such condition must meet any one or more of the categories described in paragraph 4.03.A; and

b. with respect to Work that is paid for on a Unit Price Basis, any adjustment in Contract Price will be subject to the provisions of paragraphs 9.08 and 11.03.

2. CONTRACTOR shall not be entitled to any adjustment in the Contract Price or Contract Times if:

a. CONTRACTOR knew of the existence of such conditions at the time CONTRACTOR made a final commitment to OWNER in respect of Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or

b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, explo-

ration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for CONTRACTOR prior to CONTRACTOR's making such final commitment; or

c. CONTRACTOR failed to give the written notice within the time and as required by paragraph 4.03.A.

3. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in paragraph 10.05. However, OWNER, ENGINEER, and ENGINEER's Consultants shall not be liable to CONTRACTOR for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by CONTRACTOR on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to OWNER or ENGINEER by the owners of such Underground Facilities, including OWNER, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. OWNER and ENGINEER shall not be responsible for the accuracy or completeness of any such information or data; and

2. the cost of all of the following will be included in the Contract Price, and CONTRACTOR shall have full responsibility for:

a. reviewing and checking all such information and data,

b. locating all Underground Facilities shown or indicated in the Contract Documents,

c. coordination of the Work with the owners of such Underground Facilities, including OWNER, during construction, and

d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with

reasonable accuracy in the Contract Documents, CONTRACTOR shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to OWNER and ENGINEER. ENGINEER will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, CONTRACTOR shall be responsible for the safety and protection of such Underground Facility.

2. If ENGINEER concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable *adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or *indicated ~~or not shown or indicated with reasonable accuracy~~ in the Contract Documents and that CONTRACTOR did not know of and could not reasonably have been expected to be aware of or to have anticipated. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, OWNER or CONTRACTOR may make a Claim therefor as provided in paragraph 10.05.

4.05 Reference Points

A. OWNER shall provide engineering surveys to establish reference points for construction which in ENGINEER's judgment are necessary to enable CONTRACTOR to proceed with the Work. CONTRACTOR shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of OWNER. CONTRACTOR shall report to ENGINEER whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.*

4.06 Hazardous Environmental Condition at Site

A. *Reports and Drawings:* Reference is made to the Supplementary Conditions for the identification of those* reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that

have been utilized by the ENGINEER in the preparation of the Contract Documents. *

B. *Limited Reliance by CONTRACTOR on Technical Data Authorized:* CONTRACTOR may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," CONTRACTOR may not rely upon or make any Claim against OWNER, ENGINEER or any of ENGINEER's Consultants with respect to:

1. the completeness of such reports and drawings for CONTRACTOR's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by CONTRACTOR and safety precautions and programs incident thereto; or
2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
3. any CONTRACTOR interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

C. CONTRACTOR shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. CONTRACTOR shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by CONTRACTOR, Subcontractors, Suppliers, or anyone else for whom CONTRACTOR is responsible.

D. If CONTRACTOR encounters a Hazardous Environmental Condition or if CONTRACTOR or anyone for whom CONTRACTOR is responsible creates a Hazardous Environmental Condition, CONTRACTOR shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by paragraph 6.16); and (iii) notify OWNER and ENGINEER (and promptly thereafter confirm such notice in writing). OWNER shall promptly consult with ENGINEER concerning the necessity for OWNER to retain a qualified expert to evaluate such condition or take corrective action, if any.

E. CONTRACTOR shall not be required to resume Work in connection with such condition or in any affected area until after OWNER has obtained any required permits related thereto and delivered to CONTRACTOR written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If OWNER and CONTRACTOR cannot agree as to entitlement to or on the

amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by CONTRACTOR, either party may make a Claim therefor as provided in paragraph 10.05.

F. If after receipt of such written notice CONTRACTOR does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then OWNER may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If OWNER and CONTRACTOR cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in paragraph 10.05. OWNER may have such deleted portion of the Work performed by OWNER's own forces or others in accordance with Article 7.

G. To the fullest extent permitted by Laws and Regulations, OWNER shall indemnify and hold harmless CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants and the officers, directors, partners, employees, agents, other consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by CONTRACTOR or by anyone for whom CONTRACTOR is responsible. Nothing in this paragraph 4.06.E shall obligate OWNER to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

H. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultants, and the officers, directors, partners, employees, agents, other consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by CONTRACTOR or by anyone for whom CONTRACTOR is responsible. Nothing in this paragraph 4.06.F shall obligate CONTRACTOR to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

I. The provisions of paragraphs 4.02, 4.03, and 4.04 are not intended to apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 - BONDS AND INSURANCE

5.01 Performance, Payment, and Other Bonds

A. CONTRACTOR shall furnish performance and payment Bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all CONTRACTOR's obligations under the Contract Documents. These Bonds shall remain in effect at least until one year after the date when final payment becomes due, except as provided otherwise by Laws or Regulations or by the Contract Documents. CONTRACTOR shall also furnish such other Bonds as are required by the Contract Documents. *

B. All Bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All Bonds signed by an agent must be accompanied by a certified copy of such agent's authority to act.

C. If the surety on any Bond furnished by CONTRACTOR is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of paragraph 5.01.B, CONTRACTOR shall within 20 days thereafter substitute another Bond and surety, both of which shall comply with the requirements of paragraphs 5.01.B and 5.02.

5.02 Licensed Sureties and Insurers

A. All Bonds and insurance required by the Contract Documents to be purchased and maintained by OWNER or CONTRACTOR shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue Bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 Certificates of Insurance

A. CONTRACTOR shall deliver to OWNER, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by OWNER or any other additional insured) which CONTRACTOR is required to *purchase and maintain. ~~OWNER shall deliver to CONTRACTOR, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by CONTRACTOR or any other additional insured) which OWNER is required to purchase and maintain.~~

* See Supplementary Conditions

** See Supplementary Conditions 17.08

5.04 CONTRACTOR's Liability Insurance

* A. CONTRACTOR shall purchase and maintain such liability and other insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from CONTRACTOR's performance of the Work and CONTRACTOR's other obligations under the Contract Documents, whether it is to be performed by CONTRACTOR, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;

2. claims for damages because of bodily injury, occupational sickness or disease, or death of CONTRACTOR's employees;

3. claims for damages because of bodily injury, sickness or disease, or death of any person other than CONTRACTOR's employees;

4. claims for damages insured by reasonably available personal injury liability coverage which are sustained: (i) by any person as a result of an offense directly or indirectly related to the employment of such person by CONTRACTOR, or (ii) by any other person for any other reason;

5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and

6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

B. The policies of insurance so required by this paragraph 5.04 to be purchased and maintained shall:

* 1. with respect to insurance required by paragraphs 5.04.A.3 through 5.04.A.6 inclusive, include as additional insureds (subject to any customary exclusion in respect of professional liability) OWNER, ENGINEER, ENGINEER's Consultants, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;

3. include completed operations insurance;

4. include contractual liability insurance covering CONTRACTOR's indemnity obligations under paragraphs 6.07, 6.11, and 6.20;

5. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least thirty days prior written notice has been given to OWNER and CONTRACTOR and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the CONTRACTOR pursuant to paragraph 5.03 will so provide);

6. remain in effect at least until final payment and at all times thereafter when CONTRACTOR may be correcting, removing, or replacing defective Work in accordance with paragraph 13.07; and

7. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment (and CONTRACTOR shall furnish OWNER and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to OWNER and any such additional insured of continuation of such insurance at final payment and one year thereafter).*

~~5.05 OWNER's Liability Insurance~~

~~* A. In addition to the insurance required to be provided by CONTRACTOR under paragraph 5.04, OWNER, at OWNER's option, may purchase and maintain at OWNER's expense OWNER's own liability insurance as will protect OWNER against claims which may arise from operations under the Contract Documents.~~

~~5.06 Property Insurance~~

~~* A. Unless otherwise provided in the Supplementary Conditions, OWNER shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:~~

~~1. include the interests of OWNER, CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants, and any other~~

~~individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an additional insured;~~

~~2. be written on a Builder's Risk "all risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, false work, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;~~

~~3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);~~

~~4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by OWNER prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by ENGINEER;~~

~~5. allow for partial utilization of the Work by OWNER;~~

~~6. include testing and startup; and~~

~~7. be maintained in effect until final payment is made unless otherwise agreed to in writing by OWNER, CONTRACTOR, and ENGINEER with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.~~

~~* B. OWNER shall purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of OWNER, CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants, and any other individuals or entities identified in the Supplementary Conditions, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured.~~

~~* C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to~~

~~OWNER and CONTRACTOR and to each other additional insured to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with paragraph 5.07.~~

~~* D. OWNER shall not be responsible for purchasing and maintaining any property insurance specified in this paragraph 5.06 to protect the interests of CONTRACTOR, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by CONTRACTOR, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.~~

~~* E. If CONTRACTOR requests in writing that other special insurance be included in the property insurance policies provided under paragraph 5.06, OWNER shall, if possible, include such insurance, and the cost thereof will be charged to CONTRACTOR by appropriate Change Order or Written Amendment. Prior to commencement of the Work at the Site, OWNER shall in writing advise CONTRACTOR whether or not such other insurance has been procured by OWNER.~~

5.07 Waiver of Rights

~~* A. OWNER and CONTRACTOR intend that all policies purchased in accordance with paragraph 5.06 will protect OWNER, CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or additional insureds thereunder. OWNER and CONTRACTOR waive all rights against each other and their respective officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors, ENGINEER, ENGINEER's Consultants, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance~~

~~* held by OWNER as trustee or otherwise payable under any policy so issued.~~

B. OWNER waives all rights against CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants, and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them for:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to OWNER's property or the Work caused by, arising out of, or resulting from fire or other peril whether or not insured by OWNER; and

2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by OWNER during partial utilization pursuant to paragraph 14.05, after Substantial Completion pursuant to paragraph 14.04, or after final payment pursuant to paragraph 14.07.

C. Any insurance policy maintained by OWNER covering any loss, damage or consequential loss referred to in paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against CONTRACTOR, Subcontractors, ENGINEER, or ENGINEER's Consultants and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them.

5.08 Receipt and Application of Insurance Proceeds

~~* A. Any insured loss under the policies of insurance required by paragraph 5.06 will be adjusted with OWNER and made payable to OWNER as fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of paragraph 5.08.B. OWNER shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order or Written Amendment.~~

~~* B. OWNER as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to OWNER's exercise of this power. If such objection be made, OWNER as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, OWNER as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, OWNER as fiduciary shall give bond for the proper performance of such duties.~~

5.09 Acceptance of Bonds and Insurance; Option to Replace

~~* A. If either OWNER or CONTRACTOR has any objection to the coverage afforded by or other provisions of the Bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by paragraph 2.05.C. OWNER and CONTRACTOR shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the Bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent Bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.~~

5.10 Partial Utilization, Acknowledgment of Property Insurer

A. If OWNER finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.01 Supervision and Superintendence

A. CONTRACTOR shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction, but CONTRACTOR shall not be responsible for the negligence of OWNER or ENGINEER in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents. CONTRACTOR shall be responsible to see that the completed Work complies accurately with the Contract Documents.

~~* B. At all times during the progress of the Work, CONTRACTOR shall assign a competent resident superintendent thereto who shall not be replaced without written notice to OWNER and ENGINEER except under extraordinary circumstances. The superintendent will be CONTRACTOR's representative at the Site and shall have authority to act on behalf of CONTRACTOR. All communications given to or received from the superintendent shall be binding on CONTRACTOR.~~

6.02 Labor; Working Hours

A. CONTRACTOR shall provide competent, suitably qualified personnel to survey, lay out, and construct the Work as required by the Contract Documents. CONTRACTOR shall at all times maintain good discipline and order at the Site.

B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours, and CONTRACTOR will not permit overtime work or the performance of Work on Saturday, Sunday, or any legal holiday without OWNER's written consent (which will not be unreasonably withheld) given after prior written notice to ENGINEER.

6.03 Services, Materials, and Equipment

A. Unless otherwise specified in the General Requirements, CONTRACTOR shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All warranties and guarantees specifically called for by the Specifications shall expressly run to the benefit of OWNER. If required by ENGINEER, CONTRACTOR shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 Progress Schedule

A. CONTRACTOR shall adhere to the progress schedule established in accordance with paragraph 2.07 as it may be adjusted from time to time as provided below.

1. CONTRACTOR shall submit to ENGINEER for acceptance (to the extent indicated in

paragraph 2.07) proposed adjustments in the progress schedule that will not result in changing the Contract Times (or Milestones). Such adjustments will conform generally to the progress schedule then in effect and additionally will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the progress schedule that will change the Contract Times (or Milestones) shall be submitted in accordance with the requirements of Article 12. Such adjustments may only be made by a Change Order or Written Amendment in accordance with Article 12.

*

6.05 Substitutes and "Or-Equals"

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to ENGINEER for review under the circumstances described below.

1. *"Or-Equal" Items:* If in ENGINEER's sole discretion an item of material or equipment proposed by CONTRACTOR is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by ENGINEER as an "or-equal" item, in which case review and approval of the proposed item may, in ENGINEER's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment ENGINEER determines that: (i) it is at least equal in quality, durability, appearance, strength, and design characteristics; (ii) it will reliably perform at least equally well the function imposed by the design concept of the completed Project as a functioning whole, and;

b. CONTRACTOR certifies that: (i) there is no increase in cost to the OWNER; and (ii) it will conform substantially, even with deviations, to the detailed requirements of the item named in the Contract Documents.

2. Substitute Items

a. If in ENGINEER's sole discretion an item of material or equipment proposed by CONTRACTOR does not qualify as an "or-equal" item under paragraph 6.05.A.1, it will be considered a proposed substitute item.

b. CONTRACTOR shall submit sufficient information as provided below to allow ENGINEER to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by ENGINEER from anyone other than CONTRACTOR.

c. The procedure for review by ENGINEER will be as set forth in paragraph 6.05.A.2.d, as supplemented in the General Requirements and as ENGINEER may decide is appropriate under the circumstances.

d. CONTRACTOR shall first make written application to ENGINEER for review of a proposed substitute item of material or equipment that CONTRACTOR seeks to furnish or use. The application shall certify that the proposed substitute item will perform adequately the functions and achieve the results called for by the general design, be similar in substance to that specified, and be suited to the same use as that specified. The application will state the extent, if any, to which the use of the proposed substitute item will prejudice CONTRACTOR's achievement of Substantial Completion on time, whether or not use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with OWNER for work on the Project) to adapt the design to the proposed substitute item and whether or not incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute item from that specified will be identified in the application, and available engineering, sales, maintenance, repair, and replacement services will be indicated. The application will also contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change, all of which will be considered by ENGINEER in evaluating the proposed substitute item. ENGINEER may require CONTRACTOR to furnish additional data about the proposed substitute item.

B. *Substitute Construction Methods or Procedures:*
If a specific means, method, technique, sequence, or procedure of construction is shown or indicated in and

expressly required by the Contract Documents, CONTRACTOR may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by ENGINEER. CONTRACTOR shall submit sufficient information to allow ENGINEER, in ENGINEER's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The procedure for review by ENGINEER will be similar to that provided in subparagraph 6.05.A.2.

C. *Engineer's Evaluation:* ENGINEER will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to paragraphs 6.05.A and 6.05.B. ENGINEER will be the sole judge of acceptability. No "or-equal" or substitute will be ordered, installed or utilized until ENGINEER's review is complete, which will be evidenced by either a Change Order for a substitute or an approved Shop Drawing for an "or equal." ENGINEER will advise CONTRACTOR in writing of any negative determination.

D. *Special Guarantee:* OWNER may require CONTRACTOR to furnish at CONTRACTOR's expense a special performance guarantee or other surety with respect to any substitute.

E. *ENGINEER's Cost Reimbursement:* ENGINEER will record time required by ENGINEER and ENGINEER's Consultants in evaluating substitute proposed or submitted by CONTRACTOR pursuant to paragraphs 6.05.A.2 and 6.05.B and in making changes in the Contract Documents (or in the provisions of any other direct contract with OWNER for work on the Project) occasioned thereby. Whether or not ENGINEER approves a substitute item so proposed or submitted by CONTRACTOR, CONTRACTOR shall reimburse OWNER for the charges of ENGINEER and ENGINEER's Consultants for evaluating each such proposed substitute.

F. *CONTRACTOR's Expense:* CONTRACTOR shall provide all data in support of any proposed substitute or "or-equal" at CONTRACTOR's expense.

6.06 Concerning Subcontractors, Suppliers, and Others

A. CONTRACTOR shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to OWNER as indicated in paragraph 6.06.B), whether initially or as a replacement, against whom OWNER may have reasonable objection. CONTRACTOR shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom CONTRACTOR has reasonable objection.

B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to OWNER in advance for acceptance by OWNER by a specified date prior to the Effective Date of the Agreement, and if CONTRACTOR has submitted a list thereof in accordance

with the Supplementary Conditions, OWNER's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. CONTRACTOR shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued or Written Amendment signed. No acceptance by OWNER of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of OWNER or ENGINEER to reject defective Work.

C. CONTRACTOR shall be fully responsible to OWNER and ENGINEER for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as CONTRACTOR is responsible for CONTRACTOR's own acts and omissions. Nothing in the Contract Documents shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between OWNER or ENGINEER and any such Subcontractor, Supplier or other individual or entity, nor shall it create any obligation on the part of OWNER or ENGINEER to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

D. CONTRACTOR shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with CONTRACTOR.

E. CONTRACTOR shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with ENGINEER through CONTRACTOR.

**** F.** The divisions and sections of the Specifications and the identifications of any Drawings shall not control CONTRACTOR in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

G. All Work performed for CONTRACTOR by a Subcontractor or Supplier will be pursuant to an appropriate agreement between CONTRACTOR and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of OWNER and ENGINEER. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance provided in paragraph 5.06, the agreement between the CONTRACTOR and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against

OWNER, CONTRACTOR, ENGINEER, ENGINEER's Consultants, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, CONTRACTOR will obtain the same.

6.07 Patent Fees and Royalties

A. CONTRACTOR shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of OWNER or ENGINEER its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by OWNER in the Contract Documents. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultants, and the officers, directors, partners, employees or agents, and other consultants of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 Permits

**** A.** Unless otherwise provided in the Supplementary Conditions, CONTRACTOR shall obtain and pay for all construction permits and licenses. OWNER shall assist CONTRACTOR, when necessary, in obtaining such permits and licenses. CONTRACTOR shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. CONTRACTOR shall pay all charges of utility owners for connections to the Work, and OWNER shall pay all charges of such utility owners for capital costs related thereto, such as plant investment fees.

6.09 Laws and Regulations

A. CONTRACTOR shall give all notices and comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations,

neither OWNER nor ENGINEER shall be responsible for monitoring CONTRACTOR's compliance with any Laws or Regulations.

B. If CONTRACTOR performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, CONTRACTOR shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work; however, it shall not be CONTRACTOR's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve CONTRACTOR of CONTRACTOR's obligations under paragraph 3.03.

C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work may be the subject of an adjustment in Contract Price or Contract Times. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in paragraph 10.05.

** 6.10 Taxes

A. CONTRACTOR shall pay all sales, consumer, use, and other similar taxes required to be paid by CONTRACTOR in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

** 6.11 Use of Site and Other Areas

A. *Limitation on Use of Site and Other Areas*

1. CONTRACTOR shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. CONTRACTOR shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, CONTRACTOR shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER,

ENGINEER's Consultant, and the officers, directors, partners, employees, agents, and other consultants of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against OWNER, ENGINEER, or any other party indemnified hereunder to the extent caused by or based upon CONTRACTOR's performance of the Work.

B. *Removal of Debris During Performance of the Work:* During the progress of the Work CONTRACTOR shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

C. *Cleaning:* Prior to Substantial Completion of the Work CONTRACTOR shall clean the Site and make it ready for utilization by OWNER. At the completion of the Work CONTRACTOR shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading Structures:* CONTRACTOR shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall CONTRACTOR subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 *Record Documents*

A. CONTRACTOR shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Written Amendments, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to ENGINEER for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to ENGINEER for OWNER.

6.13 *Safety and Protection*

A. CONTRACTOR shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. CONTRACTOR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

B. CONTRACTOR shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. CONTRACTOR shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property. All damage, injury, or loss to any property referred to in paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by CONTRACTOR, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by CONTRACTOR (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of OWNER or ENGINEER or ENGINEER's Consultant, or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of CONTRACTOR or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them). CONTRACTOR's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and ENGINEER has issued a notice to OWNER and CONTRACTOR in accordance with paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 Safety Representative

A. CONTRACTOR shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 Hazard Communication Programs

A. CONTRACTOR shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 Emergencies

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, CONTRACTOR is obligated to act to prevent threatened damage, injury, or loss. CONTRACTOR shall give ENGINEER prompt written notice if CONTRACTOR believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If ENGINEER determines that a change in the Contract Documents is required because of the action taken by CONTRACTOR in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 Shop Drawings and Samples

A. CONTRACTOR shall submit Shop Drawings to ENGINEER for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals. All submittals will be identified as ENGINEER may require and in the number of copies specified in the General Requirements. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show ENGINEER the services, materials, and equipment CONTRACTOR proposes to provide and to enable ENGINEER to review the information for the limited purposes required by paragraph 6.17.E.

B. CONTRACTOR shall also submit Samples to ENGINEER for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals. Each Sample will be identified clearly as to material, Supplier, pertinent data such as catalog numbers, and the use for which intended and otherwise as ENGINEER may require to enable ENGINEER to review the submittal for the limited purposes required by paragraph 6.17.E. The numbers of each Sample to be submitted will be as specified in the Specifications.

C. Where a Shop Drawing or Sample is required by the Contract Documents or the schedule of Shop Drawings and Sample submittals acceptable to ENGINEER as required by paragraph 2.07, any related Work performed prior to ENGINEER's review and approval of the pertinent submittal will be at the sole expense and responsibility of CONTRACTOR.

D. Submittal Procedures

1. Before submitting each Shop Drawing or Sample, CONTRACTOR shall have determined and verified:

a. all field measurements, quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

b. all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;

c. all information relative to means, methods, techniques, sequences, and procedures of construction and safety precautions and programs incident thereto; and

d. CONTRACTOR shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.

2. Each submittal shall bear a stamp or specific written indication that CONTRACTOR has satisfied CONTRACTOR's obligations under the Contract Documents with respect to CONTRACTOR's review and approval of that submittal.

3. At the time of each submittal, CONTRACTOR shall give ENGINEER specific written notice of such variations, if any, that the Shop Drawing or Sample submitted may have from the requirements of the Contract Documents, such notice to be in a written communication separate from the submittal; and, in addition, shall cause a specific notation to be made on each Shop Drawing and Sample submitted to ENGINEER for review and approval of each such variation.

E. *ENGINEER's Review*

* 1. ENGINEER will ~~timely~~ review and approve Shop Drawings and Samples in accordance with the schedule of Shop Drawings and Sample submittals acceptable to ENGINEER. ENGINEER's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. ENGINEER's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. ENGINEER's review and approval of Shop Drawings or Samples shall not relieve CONTRACTOR from responsibility for any variation

from the requirements of the Contract Documents unless CONTRACTOR has in writing called ENGINEER's attention to each such variation at the time of each submittal as required by paragraph 6.17.D.3 and ENGINEER has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample approval; nor will any approval by ENGINEER relieve CONTRACTOR from responsibility for complying with the requirements of paragraph 6.17.D.1.

F. *Resubmittal Procedures*

1. CONTRACTOR shall make corrections required by ENGINEER and shall return the required number of corrected copies of Shop Drawings and submit as required new Samples for review and approval. CONTRACTOR shall direct specific attention in writing to revisions other than the corrections called for by ENGINEER on previous submittals.

6.18 Continuing the Work

A. CONTRACTOR shall carry on the Work and adhere to the progress schedule during all disputes or disagreements with OWNER. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by paragraph 15.04 or as OWNER and CONTRACTOR may otherwise agree in writing.

6.19 CONTRACTOR's General Warranty and Guarantee

A. CONTRACTOR warrants and guarantees to OWNER, ENGINEER, and ENGINEER's Consultants that all Work will be in accordance with the Contract Documents and will not be defective. CONTRACTOR's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than CONTRACTOR, Subcontractors, Suppliers, or any other individual or entity for whom CONTRACTOR is responsible; or

2. normal wear and tear under normal usage.

B. CONTRACTOR's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of CONTRACTOR's obligation to perform the Work in accordance with the Contract Documents:

1. observations by ENGINEER;

2. recommendation by ENGINEER or payment by OWNER of any progress or final payment;
3. the issuance of a certificate of Substantial Completion by ENGINEER or any payment related thereto by OWNER;
4. use or occupancy of the Work or any part thereof by OWNER;
5. any acceptance by OWNER or any failure to do so;
6. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by ENGINEER;
7. any inspection, test, or approval by others; or
8. any correction of defective Work by OWNER.

6.20 Indemnification

~~* A. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultants, and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage:~~

~~1. is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom; and~~

~~2. is caused in whole or in part by any negligent act or omission of CONTRACTOR, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable, regardless of whether or not caused in part by any negligence or omission of an individual or entity indemnified hereunder or whether liability is imposed upon such indemnified party by Laws and Regulations regardless of the negligence of any such individual or entity.~~

B. In any and all claims against OWNER or ENGINEER or any of their respective consultants, agents, officers, directors, partners, or employees by any employee (or the survivor or personal representative of such employee) of CONTRACTOR, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or

anyone for whose acts any of them may be liable, the indemnification obligation under paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for CONTRACTOR or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

~~* C. The indemnification obligations of CONTRACTOR under paragraph 6.20.A shall not extend to the liability of ENGINEER and ENGINEER's Consultants or to the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them arising out of:~~

~~1. the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or~~

~~2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.~~

ARTICLE 7 - OTHER WORK

7.01 Related Work at Site

A. OWNER may perform other work related to the Project at the Site by OWNER's employees, or let other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:

1. written notice thereof will be given to CONTRACTOR prior to starting any such other work; and

2. if OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in paragraph 10.05.

B. CONTRACTOR shall afford each other contractor who is a party to such a direct contract and each utility owner (and OWNER, if OWNER is performing the other work with OWNER's employees) proper and safe access to the Site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work and shall properly coordinate the Work with theirs. Unless otherwise provided in the Contract Documents, CONTRACTOR shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. CONTRACTOR shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of ENGINEER and the others whose work will be affected. The duties and responsibilities of CONTRACTOR under

this paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of CONTRACTOR in said direct contracts between OWNER and such utility owners and other contractors.

C. If the proper execution or results of any part of CONTRACTOR's Work depends upon work performed by others under this Article 7, CONTRACTOR shall inspect such other work and promptly report to ENGINEER in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of CONTRACTOR's Work. CONTRACTOR's failure to so report will constitute an acceptance of such other work as fit and proper for integration with CONTRACTOR's Work except for latent defects and deficiencies in such other work.

7.02 Coordination

A. If OWNER intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;
2. the specific matters to be covered by such authority and responsibility will be itemized; and
3. the extent of such authority and responsibilities will be provided.

B. Unless otherwise provided in the Supplementary Conditions, OWNER shall have sole authority and responsibility for such coordination.

ARTICLE 8 - OWNER'S RESPONSIBILITIES

8.01 Communications to Contractor

A. Except as otherwise provided in these General Conditions, OWNER shall issue all communications to CONTRACTOR through ENGINEER.

8.02 Replacement of ENGINEER

A. In case of termination of the employment of ENGINEER, OWNER shall appoint an engineer to whom CONTRACTOR makes no reasonable objection, whose status under the Contract Documents shall be that of the former ENGINEER.

8.03 Furnish Data

A. OWNER shall promptly furnish the data required of OWNER under the Contract Documents.

8.04 Pay Promptly When Due

A. OWNER shall make payments to CONTRACTOR promptly when they are due as provided in paragraphs 14.02.C and 14.07.C.

8.05 Lands and Easements; Reports and Tests

A. OWNER's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in paragraphs 4.01 and 4.05. Paragraph 4.02 refers to OWNER's identifying and making available to CONTRACTOR copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by ENGINEER in preparing the Contract Documents.

8.06 Insurance

~~* A. OWNER's responsibilities, if any, in respect to purchasing and maintaining liability and property insurance are set forth in Article 5.~~

8.07 Change Orders

A. OWNER is obligated to execute Change Orders as indicated in paragraph 10.03.

8.08 Inspections, Tests, and Approvals

A. OWNER's responsibility in respect to certain inspections, tests, and approvals is set forth in paragraph 13.03.B.

8.09 Limitations on OWNER's Responsibilities

A. The OWNER shall not supervise, direct, or have control or authority over, nor be responsible for, CONTRACTOR's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the performance of the Work. OWNER will not be responsible for CONTRACTOR's failure to perform the Work in accordance with the Contract Documents.

8.10 Undisclosed Hazardous Environmental Condition

A. OWNER's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in paragraph 4.06.

8.11 Evidence of Financial Arrangements

A. If and to the extent OWNER has agreed to furnish CONTRACTOR reasonable evidence that financial arrangements have been made to satisfy OWNER's obligations under the Contract Documents, OWNER's

responsibility in respect thereof will be as set forth in the Supplementary Conditions.

ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

9.01 OWNER'S Representative

A. ENGINEER will be OWNER's representative during the construction period. The duties and responsibilities and the limitations of authority of ENGINEER as OWNER's representative during construction are set forth in the Contract Documents and will not be changed without written consent of OWNER and ENGINEER.

*

9.02 Visits to Site

A. ENGINEER will make visits to the Site at intervals appropriate to the various stages of construction as ENGINEER deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of CONTRACTOR's executed Work. Based on information obtained during such visits and observations, ENGINEER, for the benefit of OWNER, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. ENGINEER will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. ENGINEER's efforts will be directed toward providing for OWNER a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, ENGINEER will keep OWNER informed of the progress of the Work and will endeavor to guard OWNER against defective Work.

B. ENGINEER's visits and observations are subject to all the limitations on ENGINEER's authority and responsibility set forth in paragraph 9.10, and particularly, but without limitation, during or as a result of ENGINEER's visits or observations of CONTRACTOR's Work ENGINEER will not supervise, direct, control, or have authority over or be responsible for CONTRACTOR's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the performance of the Work.

9.03 Project Representative

A. If OWNER and ENGINEER agree, ENGINEER will furnish a Resident Project Representative to assist ENGINEER in providing more extensive observation of the Work. The responsibilities and authority and limitations thereon of any such Resident Project Representative and assistants will be as provided in paragraph 9.10 and in the Supplementary Conditions. If OWNER designates another representative or agent to represent OWNER at the Site who is not ENGINEER's Consultant, agent or employee, the responsibilities and authority and limitations thereon of such

other individual or entity will be as provided in the Supplementary Conditions.

9.04 Clarifications and Interpretations

A. ENGINEER will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents as ENGINEER may determine necessary, which shall be consistent with the intent of and reasonably inferable from the Contract Documents. Such written clarifications and interpretations will be binding on OWNER and CONTRACTOR. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a written clarification or interpretation, a Claim may be made therefor as provided in paragraph 10.05.

**

9.05 Authorized Variations in Work

A. ENGINEER may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on OWNER and also on CONTRACTOR, who shall perform the Work involved promptly. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of a Field Order, a Claim may be made therefor as provided in paragraph 10.05.

9.06 Rejecting Defective Work

A. ENGINEER will have authority to disapprove or reject Work which ENGINEER believes to be defective, or that ENGINEER believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. ENGINEER will also have authority to require special inspection or testing of the Work as provided in paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.07 Shop Drawings, Change Orders and Payments

A. In connection with ENGINEER's authority as to Shop Drawings and Samples, see paragraph 6.17.

B. In connection with ENGINEER's authority as to Change Orders, see Articles 10, 11, and 12.

C. In connection with ENGINEER's authority as to Applications for Payment, see Article 14.

9.08 Determinations for Unit Price Work

A. ENGINEER will determine the actual quantities and classifications of Unit Price Work performed by CONTRACTOR. ENGINEER will review with CONTRACTOR the ENGINEER's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). ENGINEER's written decision thereon will be final and binding (except as modified by ENGINEER to reflect changed factual conditions or more accurate data) upon OWNER and CONTRACTOR, subject to the provisions of paragraph 10.05.

9.09 Decisions on Requirements of Contract Documents and Acceptability of Work

A. ENGINEER will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. Claims, disputes and other matters relating to the acceptability of the Work, the quantities and classifications of Unit Price Work, the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, and Claims seeking changes in the Contract Price or Contract Times will be referred initially to ENGINEER in writing, in accordance with the provisions of paragraph 10.05, with a request for a formal decision.

B. When functioning as interpreter and judge under this paragraph 9.09, ENGINEER will not show partiality to OWNER or CONTRACTOR and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity. The rendering of a decision by ENGINEER pursuant to this paragraph 9.09 with respect to any such Claim, dispute, or other matter (except any which have been waived by the making or acceptance of final payment as provided in paragraph 14.07) will be a condition precedent to any exercise by OWNER or CONTRACTOR of such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any such Claim, dispute, or other matter.

9.10 Limitations on ENGINEER's Authority and Responsibilities

A. Neither ENGINEER's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by ENGINEER in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by ENGINEER shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by ENGINEER to CONTRACTOR, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. ENGINEER will not supervise, direct, control, or have authority over or be responsible for CONTRACTOR's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the perfor-

mance of the Work. ENGINEER will not be responsible for CONTRACTOR's failure to perform the Work in accordance with the Contract Documents.

C. ENGINEER will not be responsible for the acts or omissions of CONTRACTOR or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. ENGINEER's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with, the Contract Documents.

E. The limitations upon authority and responsibility set forth in this paragraph 9.10 shall also apply to ENGINEER's Consultants, Resident Project Representative, and assistants.

ARTICLE 10 - CHANGES IN THE WORK; CLAIMS

10.01 Authorized Changes in the Work

A. Without invalidating the Agreement and without notice to any surety, OWNER may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Written Amendment, a Change Order, or a Work Change Directive. Upon receipt of any such document, CONTRACTOR shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

B. If OWNER and CONTRACTOR are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in paragraph 10.05.

10.02 Unauthorized Changes in the Work

A. CONTRACTOR shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in paragraph 3.04, except in the case of an emergency as provided in paragraph 6.16 or in the case of uncovering Work as provided in paragraph 13.04.B.

10.03 Execution of Change Orders

A. OWNER and CONTRACTOR shall execute appropriate Change Orders recommended by ENGINEER (or Written Amendments) covering:

1. changes in the Work which are: (i) ordered by OWNER pursuant to paragraph 10.01.A, (ii) required because of acceptance of defective Work under paragraph 13.08.A or OWNER's correction of defective Work under paragraph 13.09, or (iii) agreed to by the parties;

2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and

3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by ENGINEER pursuant to paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, CONTRACTOR shall carry on the Work and adhere to the progress schedule as provided in paragraph 6.18.A.

10.04 Notification to Surety

A. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the provisions of any Bond to be given to a surety, the giving of any such notice will be CONTRACTOR's responsibility. The amount of each applicable Bond will be adjusted to reflect the effect of any such change.

10.05 Claims and Disputes

A. *Notice:* Written notice stating the general nature of each Claim, dispute, or other matter shall be delivered by the claimant to ENGINEER and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. Notice of the amount or extent of the Claim, dispute, or other matter with supporting data shall be delivered to the ENGINEER and the other party to the Contract within 60 days after the start of such event (unless ENGINEER allows additional time for claimant to submit additional or more accurate data in support of such Claim, dispute, or other matter). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of paragraph 12.01.B. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions of paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to ENGINEER and the claimant within 30 days after receipt of the claimant's last submittal (unless ENGINEER allows additional time).

B. *ENGINEER's Decision:* ENGINEER will render a formal decision in writing within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any. ENGINEER's written decision on such Claim, dispute, or other matter will be final and binding upon OWNER and CONTRACTOR unless:

1. an appeal from ENGINEER's decision is taken within the time limits and in accordance with the dispute resolution procedures set forth in Article 16; or

2. if no such dispute resolution procedures have been set forth in Article 16, a written notice of intention to appeal from ENGINEER's written decision is delivered by OWNER or CONTRACTOR to the other and to ENGINEER within 30 days after the date of such decision, and a formal proceeding is instituted by the appealing party in a forum of competent jurisdiction within 60 days after the date of such decision or within 60 days after Substantial Completion, whichever is later (unless otherwise agreed in writing by OWNER and CONTRACTOR), to exercise such rights or remedies as the appealing party may have with respect to such Claim, dispute, or other matter in accordance with applicable Laws and Regulations.

C. If ENGINEER does not render a formal decision in writing within the time stated in paragraph 10.05.B, a decision denying the Claim in its entirety shall be deemed to have been issued 31 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any.

D. No Claim for an adjustment in Contract Price or Contract Times (or Milestones) will be valid if not submitted in accordance with this paragraph 10.05.

ARTICLE 11 - COST OF THE WORK; CASH ALLOWANCES; UNIT PRICE WORK

**

11.01 Cost of the Work

~~A. *Costs Included:* The term Cost of the Work means the sum of all costs necessarily incurred and paid by CONTRACTOR in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to CONTRACTOR will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by OWNER, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items, and shall not include any of the costs itemized in paragraph 11.01.B.~~

~~1. Payroll costs for employees in the direct employ of CONTRACTOR in the performance of the Work under schedules of job classifications agreed upon by OWNER and CONTRACTOR. Such employees shall include without limitation superintendents, foremen, and other personnel employed full time at the Site. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by OWNER.~~

~~2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to CONTRACTOR unless OWNER deposits funds with CONTRACTOR with which to make payments, in which case the cash discounts shall accrue to OWNER. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to OWNER, and CONTRACTOR shall make provisions so that they may be obtained.~~

~~3. Payments made by CONTRACTOR to Subcontractors for Work performed by Subcontractors. If required by OWNER, CON-~~

~~TRACTOR shall obtain competitive bids from subcontractors acceptable to OWNER and CONTRACTOR and shall deliver such bids to OWNER, who will then determine, with the advice of ENGINEER, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as CONTRACTOR's Cost of the Work and fee as provided in this paragraph 11.01.~~

~~4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.~~

~~5. Supplemental costs including the following:~~

~~a. The proportion of necessary transportation, travel, and subsistence expenses of CONTRACTOR's employees incurred in discharge of duties connected with the Work.~~

~~b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of CONTRACTOR.~~

~~c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from CONTRACTOR or others in accordance with rental agreements approved by OWNER with the advice of ENGINEER, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.~~

~~d. Sales, consumer, use, and other similar taxes related to the Work, and for which CONTRACTOR is liable, imposed by Laws and Regulations.~~

~~e. Deposits lost for causes other than negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.~~

~~f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by CONTRACTOR in connection with the perfor-~~

~~mance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with paragraph 5.06.D); provided such losses and damages have resulted from causes other than the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of OWNER. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining CONTRACTOR's fee.~~

~~g. The cost of utilities, fuel, and sanitary facilities at the Site.~~

~~h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, expressage, and similar petty cash items in connection with the Work.~~

~~i. When the Cost of the Work is used to determine the value of a Change Order or of a Claim, the cost of premiums for additional Bonds and insurance required because of the changes in the Work or caused by the event giving rise to the Claim.~~

~~j. When all the Work is performed on the basis of cost plus, the costs of premiums for all Bonds and insurance CONTRACTOR is required by the Contract Documents to purchase and maintain.~~

~~B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:~~

~~1. Payroll costs and other compensation of CONTRACTOR's officers, executives, principals (of partnerships and sole proprietorships), general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by CONTRACTOR, whether at the Site or in CONTRACTOR's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in paragraph 11.01.A.1 or specifically covered by paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the CONTRACTOR's fee.~~

~~2. Expenses of CONTRACTOR's principal and branch offices other than CONTRACTOR's office at the Site.~~

~~3. Any part of CONTRACTOR's capital expenses, including interest on CONTRACTOR's capital employed for the Work and charges against CONTRACTOR for delinquent payments.~~

~~4. Costs due to the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.~~

~~5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraphs 11.01.A and 11.01.B.~~

~~C. *CONTRACTOR's Fee:* When all the Work is performed on the basis of cost plus, CONTRACTOR's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, CONTRACTOR's fee shall be determined as set forth in paragraph 12.01.C.~~

~~D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to paragraphs 11.01.A and 11.01.B, CONTRACTOR will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to ENGINEER an itemized cost breakdown together with supporting data.~~

~~11.02 Cash Allowances~~

~~A. It is understood that CONTRACTOR has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums as may be acceptable to OWNER and ENGINEER. CONTRACTOR agrees that:~~

~~1. the allowances include the cost to CONTRACTOR (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and~~

~~2. CONTRACTOR's costs for unloading and handling on the Site, labor, installation costs, overhead, profit, and other expenses contemplated for the allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.~~

~~B. Prior to final payment, an appropriate Change Order will be issued as recommended by ENGINEER to reflect actual amounts due CONTRACTOR on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.~~

~~11.03 Unit Price Work~~

~~A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price~~

Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by CONTRACTOR will be made by ENGINEER subject to the provisions of paragraph 9.08.

B. Each unit price will be deemed to include an amount considered by CONTRACTOR to be adequate to cover CONTRACTOR's overhead and profit for each separately identified item.

*

C. OWNER or CONTRACTOR may make a Claim for an adjustment in the Contract Price in accordance with paragraph 10.05 if:

1. the quantity of any item of Unit Price Work performed by CONTRACTOR differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

2. there is no corresponding adjustment with respect any other item of Work; and

3. if CONTRACTOR believes that CONTRACTOR is entitled to an increase in Contract Price as a result of having incurred additional expense or OWNER believes that OWNER is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 - CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 Change of Contract Price

**

A. The Contract Price may only be changed by a Change Order or by a Written Amendment. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the ENGINEER and the other party to the Contract in accordance with the provisions of paragraph 10.05.

B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:

1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of paragraph 11.03); or

2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an

allowance for overhead and profit not necessarily in accordance with paragraph 12.01.C.2); or

3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in paragraph 11.01) plus a CONTRACTOR's fee for overhead and profit (determined as provided in paragraph 12.01.C).

C. *CONTRACTOR's Fee:* The CONTRACTOR's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or

2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

a. for costs incurred under paragraphs 11.01.A.1 and 11.01.A.2, the CONTRACTOR's fee shall be 15 percent;

b. for costs incurred under paragraph 11.01.A.3, the CONTRACTOR's fee shall be five percent;

c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of paragraph 12.01.C.2.a is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and CONTRACTOR will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

d. no fee shall be payable on the basis of costs itemized under paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;

e. the amount of credit to be allowed by CONTRACTOR to OWNER for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in CONTRACTOR's fee by an amount equal to five percent of such net decrease; and

f. when both additions and credits are involved in any one change, the adjustment in CONTRACTOR's fee shall be computed on the basis of the net change in accordance with paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 Change of Contract Times

A. The Contract Times (or Milestones) may only be changed by a Change Order or by a Written Amendment. Any Claim for an adjustment in the Contract Times (or Milestones) shall be based on written notice submitted by the party making the claim to the ENGINEER and the other party to the Contract in accordance with the provisions of paragraph 10.05.

B. Any adjustment of the Contract Times (or Milestones) covered by a Change Order or of any Claim for an adjustment in the Contract Times (or Milestones) will be determined in accordance with the provisions of this* Article 12.

12.03 Delays Beyond CONTRACTOR's Control

A. Where CONTRACTOR is prevented from completing any part of the Work within the Contract Times (or Milestones) due to delay beyond the control of CONTRACTOR, the Contract Times (or Milestones) will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in paragraph 12.02.A. Delays beyond the control of CONTRACTOR shall include, but not be limited to, acts or neglect by OWNER, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

12.04 Delays Within CONTRACTOR's Control

A. The Contract Times (or Milestones) will not be extended due to delays within the control of CONTRACTOR. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of CONTRACTOR.

12.05 Delays Beyond OWNER's and CONTRACTOR's Control

A. Where CONTRACTOR is prevented from completing any part of the Work within the Contract Times (or Milestones) due to delay beyond the control of both OWNER and CONTRACTOR, an extension of the Contract Times (or Milestones) in an amount equal to the time lost due to such delay shall be CONTRACTOR's sole and exclusive remedy for such delay.

12.06 Delay Damages

A. In no event shall OWNER or ENGINEER be liable to CONTRACTOR, any Subcontractor, any Supplier, or any other person or organization, or to any surety for or employee or agent of any of them, for damages arising out of or resulting from:

1. delays caused by or within the control of CONTRACTOR; or

2. delays beyond the control of both OWNER and CONTRACTOR including but not limited to fires, floods, epidemics, abnormal weather conditions, acts of God, or acts or neglect by utility owners or other contractors performing other work as contemplated by Article 7.

B. Nothing in this paragraph 12.06 bars a change in Contract Price pursuant to this Article 12 to compensate CONTRACTOR due to delay, interference, or disruption directly attributable to actions or inactions of OWNER or anyone for whom OWNER is responsible.

ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 Notice of Defects

A. Prompt notice of all defective Work of which OWNER or ENGINEER has actual knowledge will be given to CONTRACTOR. All defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 Access to Work

A. OWNER, ENGINEER, ENGINEER's Consultants, other representatives and personnel of OWNER, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspecting, and testing. CONTRACTOR shall provide them proper and safe conditions for such access and advise them of CONTRACTOR's Site safety procedures and programs so that they may comply therewith as applicable.

13.03 Tests and Inspections

A. CONTRACTOR shall give ENGINEER timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

B. OWNER shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:

1. for inspections, tests, or approvals covered by paragraphs 13.03.C and 13.03.D below;
2. that costs incurred in connection with tests or inspections conducted pursuant to paragraph 13.04.B shall be paid as provided in said paragraph 13.04.B; and
3. as otherwise specifically provided in the Contract Documents.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other

representative of such public body, CONTRACTOR shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish ENGINEER the required certificates of inspection or approval.

D. CONTRACTOR shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for OWNER's and ENGINEER's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to CONTRACTOR's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to OWNER and ENGINEER.

E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by CONTRACTOR without written concurrence of ENGINEER, it must, if requested by ENGINEER, be uncovered for observation.

F. Uncovering Work as provided in paragraph 13.03.E shall be at CONTRACTOR's expense unless CONTRACTOR has given ENGINEER timely notice of CONTRACTOR's intention to cover the same and ENGINEER has not acted with reasonable promptness in response to such notice.

13.04 Uncovering Work

A. If any Work is covered contrary to the written request of ENGINEER, it must, if requested by ENGINEER, be uncovered for ENGINEER's observation and replaced at CONTRACTOR's expense.

B. If ENGINEER considers it necessary or advisable that covered Work be observed by ENGINEER or inspected or tested by others, CONTRACTOR, at ENGINEER's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as ENGINEER may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment. If it is found that such Work is defective, CONTRACTOR shall pay all Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and OWNER shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, OWNER may make a Claim therefor as provided in paragraph 10.05. If, however, such Work is not found to be defective, CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Times (or Milestones), or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to

agree as to the amount or extent thereof, CONTRACTOR may make a Claim therefor as provided in paragraph 10.05.

13.05 OWNER May Stop the Work

A. If the Work is defective, or CONTRACTOR fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, OWNER may order CONTRACTOR to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of OWNER to stop the Work shall not give rise to any duty on the part of OWNER to exercise this right for the benefit of CONTRACTOR, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 Correction or Removal of Defective Work

A. CONTRACTOR shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by ENGINEER, remove it from the Project and replace it with Work that is not defective. CONTRACTOR shall pay all Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

13.07 Correction Period

*

~~A. If within one year after the date of Substantial Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for CONTRACTOR's use by OWNER or permitted by Laws and Regulations as contemplated in paragraph 6.11.A is found to be defective, CONTRACTOR shall promptly, without cost to OWNER and in accordance with OWNER's written instructions: (i) repair such defective land or areas, or (ii) correct such defective Work or, if the defective Work has been rejected by OWNER, remove it from the Project and replace it with Work that is not defective, and (iii) satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom. If CONTRACTOR does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, OWNER may have the defective Work corrected or repaired or may have the rejected Work removed and replaced, and all Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all~~

~~costs of repair or replacement of work of others) will be paid by CONTRACTOR.~~

B. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications or by Written Amendment.

C. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

D. CONTRACTOR's obligations under this paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this paragraph 13.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.

13.08 Acceptance of Defective Work

A. If, instead of requiring correction or removal and replacement of defective Work, OWNER (and, prior to ENGINEER's recommendation of final payment, ENGINEER) prefers to accept it, OWNER may do so. CONTRACTOR shall pay all Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to OWNER's evaluation of and determination to accept such defective Work (such costs to be approved by ENGINEER as to reasonableness) and the diminished value of the Work to the extent not otherwise paid by CONTRACTOR pursuant to this sentence. If any such acceptance occurs prior to ENGINEER's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and OWNER shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, OWNER may make a Claim therefor as provided in paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by CONTRACTOR to OWNER.

13.09 OWNER May Correct Defective Work

* A. If CONTRACTOR fails within a reasonable time after written notice from ENGINEER to correct defective Work or to remove and replace rejected Work as required by ENGINEER in accordance with paragraph 13.06.A, or if CONTRACTOR fails to perform the Work in accordance with the Contract Documents, or if CONTRACTOR fails to comply with any other provision of the Contract Documents, OWNER may, after seven days written notice to CONTRACTOR, correct and remedy any such deficiency.

B. In exercising the rights and remedies under this paragraph, OWNER shall proceed expeditiously. In connection with such corrective and remedial action, OWNER may exclude CONTRACTOR from all or part of the Site, take possession of all or part of the Work and suspend CONTRACTOR's services related thereto, take possession of CONTRACTOR's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which OWNER has paid CONTRACTOR but which are stored elsewhere. CONTRACTOR shall allow OWNER, OWNER's representatives, agents and employees, OWNER's other contractors, and ENGINEER and ENGINEER's Consultants access to the Site to enable OWNER to exercise the rights and remedies under this paragraph.

C. All Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by OWNER in exercising the rights and remedies under this paragraph 13.09 will be charged against CONTRACTOR, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and OWNER shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, OWNER may make a Claim therefor as provided in paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of CONTRACTOR's defective Work.

D. CONTRACTOR shall not be allowed an extension of the Contract Times (or Milestones) because of any delay in the performance of the Work attributable to the exercise by OWNER of OWNER's rights and remedies under this paragraph 13.09.

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 Schedule of Values

A. The schedule of values established as provided in paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to ENGINEER. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 Progress Payments

A. Applications for Payments

1. At least 20 days before the date established for each progress payment (but not more often than once a month), CONTRACTOR shall submit to ENGINEER for review an Application for Payment filled out and signed by CONTRACTOR covering

the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that OWNER has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect OWNER's interest therein, all of which must be satisfactory to OWNER.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of CONTRACTOR stating that all previous progress payments received on account of the Work have been applied on account to discharge CONTRACTOR's legitimate obligations associated with prior Applications for Payment.

~~* 3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.~~

B. Review of Applications

~~** 1. ENGINEER will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to OWNER or return the Application to CONTRACTOR indicating in writing ENGINEER's reasons for refusing to recommend payment. In the latter case, CONTRACTOR may make the necessary corrections and resubmit the Application.~~

2. ENGINEER's recommendation of any payment requested in an Application for Payment will constitute a representation by ENGINEER to OWNER, based on ENGINEER's observations on the Site of the executed Work as an experienced and qualified design professional and on ENGINEER's review of the Application for Payment and the accompanying data and schedules, that to the best of ENGINEER's knowledge, information and belief:

a. the Work has progressed to the point indicated;

b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under paragraph 9.08, and to

any other qualifications stated in the recommendation); and

c. the conditions precedent to CONTRACTOR's being entitled to such payment appear to have been fulfilled in so far as it is ENGINEER's responsibility to observe the Work.

3. By recommending any such payment ENGINEER will not thereby be deemed to have represented that: (i) inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to ENGINEER in the Contract Documents; or (ii) that there may not be other matters or issues between the parties that might entitle CONTRACTOR to be paid additionally by OWNER or entitle OWNER to withhold payment to CONTRACTOR.

4. Neither ENGINEER's review of CONTRACTOR's Work for the purposes of recommending payments nor ENGINEER's recommendation of any payment, including final payment, will impose responsibility on ENGINEER to supervise, direct, or control the Work or for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for CONTRACTOR's failure to comply with Laws and Regulations applicable to CONTRACTOR's performance of the Work. Additionally, said review or recommendation will not impose responsibility on ENGINEER to make any examination to ascertain how or for what purposes CONTRACTOR has used the moneys paid on account of the Contract Price, or to determine that title to any of the Work, materials, or equipment has passed to OWNER free and clear of any Liens.

5. ENGINEER may refuse to recommend the whole or any part of any payment if, in ENGINEER's opinion, it would be incorrect to make the representations to OWNER referred to in paragraph 14.02.B.2. ENGINEER may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in ENGINEER's opinion to protect OWNER from loss because:

a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;

b. the Contract Price has been reduced by Written Amendment or Change Orders;

c. OWNER has been required to correct defective Work or complete Work in accordance with paragraph 13.09; or

d. ENGINEER has actual knowledge of the occurrence of any of the events enumerated in paragraph 15.02.A.

C. *Payment Becomes Due*

*

1. Ten days after presentation of the Application for Payment to OWNER with ENGINEER's recommendation, the amount recommended will (subject to the provisions of paragraph 14.02.D) become due, and when due will be paid by OWNER to CONTRACTOR.

**

D. *Reduction in Payment*

1. OWNER may refuse to make payment of the full amount recommended by ENGINEER because:

a. claims have been made against OWNER on account of CONTRACTOR's performance or furnishing of the Work;

b. Liens have been filed in connection with the Work, except where CONTRACTOR has delivered a specific Bond satisfactory to OWNER to secure the satisfaction and discharge of such Liens;

c. there are other items entitling OWNER to a set-off against the amount recommended; or

d. OWNER has actual knowledge of the occurrence of any of the events enumerated in paragraphs 14.02.B.5.a through 14.02.B.5.c or paragraph 15.02.A.

2. If OWNER refuses to make payment of the full amount recommended by ENGINEER, OWNER must give CONTRACTOR immediate written notice (with a copy to ENGINEER) stating the reasons for such action and promptly pay CONTRACTOR any amount remaining after deduction of the amount so withheld. OWNER shall promptly pay CONTRACTOR the amount so withheld, or any adjustment thereto agreed to by OWNER and CONTRACTOR, when CONTRACTOR corrects to OWNER's satisfaction the reasons for such action.

3. If it is subsequently determined that OWNER's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by paragraph 14.02.C.1.

14.03 *CONTRACTOR's Warranty of Title*

* ~~A. CONTRACTOR warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to OWNER no later than the time of payment free and clear of all Liens.~~

14.04 *Substantial Completion*

A. When CONTRACTOR considers the entire Work ready for its intended use CONTRACTOR shall notify OWNER and ENGINEER in writing that the entire Work is substantially complete (except for items specifically listed by CONTRACTOR as incomplete) and request that ENGINEER issue a certificate of Substantial Completion. Promptly thereafter, OWNER, CONTRACTOR, and ENGINEER shall make an inspection of the Work to determine the status of completion. If ENGINEER does not consider the Work substantially complete, ENGINEER will notify CONTRACTOR in writing giving the reasons therefor. If ENGINEER considers the Work substantially complete, ENGINEER will prepare and deliver to OWNER a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. OWNER shall have seven days after receipt of the tentative certificate during which to make written objection to ENGINEER as to any provisions of the certificate or attached list. If, after considering such objections, ENGINEER concludes that the Work is not substantially complete, ENGINEER will within 14 days after submission of the tentative certificate to OWNER notify CONTRACTOR in writing, stating the reasons therefor. If, after consideration of OWNER's objections, ENGINEER considers the Work substantially complete, ENGINEER will within said 14 days execute and deliver to OWNER and CONTRACTOR a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as ENGINEER believes justified after consideration of any objections from OWNER. At the time of delivery of the tentative certificate of Substantial Completion ENGINEER will deliver to OWNER and CONTRACTOR a written recommendation as to division of responsibilities pending final payment between OWNER and CONTRACTOR with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless OWNER and CONTRACTOR agree otherwise in writing and so inform ENGINEER in writing prior to ENGINEER's issuing the definitive certificate of Substantial Completion, ENGINEER's aforesaid recommendation will be binding on OWNER and CONTRACTOR until final payment.

B. OWNER shall have the right to exclude CONTRACTOR from the Site after the date of Substantial Completion, but OWNER shall allow CONTRACTOR reasonable access to complete or correct items on the tentative list.

14.05 Partial Utilization

A. Use by OWNER at OWNER's option of any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which OWNER, ENGINEER, and CONTRACTOR agree constitutes a separately functioning and usable part of the Work that can be used by OWNER for its intended purpose without significant interference with CONTRACTOR's performance of the remainder of the Work, may be accomplished prior to Substantial Completion of all the Work subject to the following conditions.

1. OWNER at any time may request CONTRACTOR in writing to permit OWNER to use any such part of the Work which OWNER believes to be ready for its intended use and substantially complete. If CONTRACTOR agrees that such part of the Work is substantially complete, CONTRACTOR will certify to OWNER and ENGINEER that such part of the Work is substantially complete and request ENGINEER to issue a certificate of Substantial Completion for that part of the Work. CONTRACTOR at any time may notify OWNER and ENGINEER in writing that CONTRACTOR considers any such part of the Work ready for its intended use and substantially complete and request ENGINEER to issue a certificate of Substantial Completion for that part of the Work. Within a reasonable time after either such request, OWNER, CONTRACTOR, and ENGINEER shall make an inspection of that part of the Work to determine its status of completion. If ENGINEER does not consider that part of the Work to be substantially complete, ENGINEER will notify OWNER and CONTRACTOR in writing giving the reasons therefor. If ENGINEER considers that part of the Work to be substantially complete, the provisions of paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

2. No occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of paragraph 5.10 regarding property insurance.

14.06 Final Inspection

A. Upon written notice from CONTRACTOR that the entire Work or an agreed portion thereof is complete, ENGINEER will promptly make a final inspection with OWNER and CONTRACTOR and will notify CONTRACTOR in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. CONTRACTOR shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 Final Payment

A. Application for Payment

1. After CONTRACTOR has, in the opinion of ENGINEER, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, Bonds, certificates or other evidence of insurance certificates of inspection, marked-up record documents (as provided in paragraph 6.12), and other documents, CONTRACTOR may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by: (i) all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by subparagraph 5.04.B.7; (ii) consent of the surety, if any, to final payment; and (iii) complete and legally effective releases or waivers (satisfactory to OWNER) of all Lien rights arising out of or Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in paragraph 14.07.A.2 and as approved by OWNER, CONTRACTOR may furnish receipts or releases in full and an affidavit of CONTRACTOR that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which OWNER or OWNER's property might in any way be responsible have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, CONTRACTOR may furnish a Bond or other collateral satisfactory to OWNER to indemnify OWNER against any Lien.

B. Review of Application and Acceptance

~~** 1. If, on the basis of ENGINEER's observation of the Work during construction and final inspection, and ENGINEER's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, ENGINEER is satisfied that the Work has been completed and CONTRACTOR's other obligations under the Contract Documents have been fulfilled, ENGINEER will, within ten days after receipt of the final Application for Payment, indicate in writing ENGINEER's recommendation of payment and present the Application for Payment to OWNER for payment. At the same time ENGINEER will also give written notice to OWNER and CONTRACTOR that the Work is acceptable subject to the provisions of paragraph 14.09. Otherwise,~~

~~ENGINEER will return the Application for Payment to CONTRACTOR, indicating in writing the reasons for refusing to recommend final payment, in which case CONTRACTOR shall make the necessary corrections and resubmit the Application for Payment.~~

C. *Payment Becomes Due*

1. Thirty days after the presentation to OWNER of the Application for Payment and accompanying documentation, the amount recommended by ENGINEER will become due and, when due, will be paid by OWNER to CONTRACTOR.

14.08 Final Completion Delayed

A. If, through no fault of CONTRACTOR, final completion of the Work is significantly delayed, and if ENGINEER so confirms, OWNER shall, upon receipt of CONTRACTOR's final Application for Payment and recommendation of ENGINEER, and without terminating the Agreement, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by OWNER for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if Bonds have been furnished as required in paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by CONTRACTOR to ENGINEER with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 Waiver of Claims

A. The making and acceptance of final payment will constitute:

1. a waiver of all Claims by OWNER against CONTRACTOR, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from CONTRACTOR's continuing obligations under the Contract Documents; and

2. a waiver of all Claims by CONTRACTOR against OWNER other than those previously made in writing which are still unsettled.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

15.01 OWNER May Suspend Work

~~** A. At any time and without cause, OWNER may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to CON-~~

~~TRACTOR and ENGINEER which will fix the date on which Work will be resumed. CONTRACTOR shall resume the Work on the date so fixed. CONTRACTOR shall be allowed an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if CONTRACTOR makes a Claim therefor as provided in paragraph 10.05.~~

15.02

OWNER May Terminate for Cause

A. The occurrence of any one or more of the following events will justify termination for cause:

1. CONTRACTOR's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the progress schedule established under paragraph 2.07 as adjusted from time to time pursuant to paragraph 6.04);

2. CONTRACTOR's disregard of Laws or Regulations of any public body having jurisdiction;

3. CONTRACTOR's disregard of the authority of ENGINEER; or

4. CONTRACTOR's violation in any substantial way of any provisions of the Contract Documents.

*

B. If one or more of the events identified in paragraph 15.02.A occur, OWNER may, after giving CONTRACTOR (and the surety, if any) seven days written notice, terminate the services of CONTRACTOR, exclude CONTRACTOR from the Site, and take possession of the Work and of all CONTRACTOR's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by CONTRACTOR (without liability to CONTRACTOR for trespass or conversion), incorporate in the Work all materials and equipment stored at the Site or for which OWNER has paid CONTRACTOR but which are stored elsewhere, and finish the Work as OWNER may deem expedient. In such case, CONTRACTOR shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by OWNER arising out of or relating to completing the Work, such excess will be paid to CONTRACTOR. If such claims, costs, losses, and damages exceed such unpaid balance, CONTRACTOR shall pay the difference to OWNER. Such claims, costs, losses, and damages incurred by OWNER will be reviewed by ENGINEER as to their reasonableness and, when so approved by ENGINEER, incorporated in a Change Order. When exercising any rights or remedies

under this paragraph OWNER shall not be required to obtain the lowest price for the Work performed.

C. Where CONTRACTOR's services have been so terminated by OWNER, the termination will not affect any rights or remedies of OWNER against CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of moneys due CONTRACTOR by OWNER will not release CONTRACTOR from liability.

15.03 OWNER May Terminate For Convenience

A. Upon seven days written notice to CONTRACTOR and ENGINEER, OWNER may, without cause and without prejudice to any other right or remedy of OWNER, elect to terminate the Contract. In such case, CONTRACTOR shall be paid (without duplication of any items):

1. for completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. for expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

3. for all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and

4. for reasonable expenses directly attributable to termination.

B. CONTRACTOR shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 CONTRACTOR May Stop Work or Terminate

A. If, through no act or fault of CONTRACTOR, the Work is suspended for more than 90 consecutive days by OWNER or under an order of court or other public authority, or ENGINEER fails to act on any Application for Payment within 30 days after it is submitted, or OWNER fails for 30 days to pay CONTRACTOR any sum finally determined to be due, then CONTRACTOR may, upon seven days written notice to OWNER and ENGINEER, and provided OWNER or ENGINEER do not remedy such suspension or failure within that time, terminate the Contract and recover from OWNER payment on the same terms as provided in paragraph 15.03. In lieu of terminating the Contract and without prejudice to any other right or

remedy, if ENGINEER has failed to act on an Application for Payment within 30 days after it is submitted, or OWNER has failed for 30 days to pay CONTRACTOR any sum finally determined to be due, CONTRACTOR may, seven days after written notice to OWNER and ENGINEER, stop the Work until payment is made of all such amounts due CONTRACTOR, including interest thereon. The provisions of this paragraph 15.04 are not intended to preclude CONTRACTOR from making a Claim under paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to CONTRACTOR's stopping the Work as permitted by this paragraph.

ARTICLE 16 - DISPUTE RESOLUTION

16.01 Methods and Procedures

A. Dispute resolution methods and procedures, if any, shall be as set forth in the Supplementary Conditions. If no method and procedure has been set forth, and subject to the provisions of paragraphs 9.09 and 10.05, OWNER and CONTRACTOR may exercise such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any dispute.

ARTICLE 17 - MISCELLANEOUS

17.01 Giving Notice

A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 Computation of Times

A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 Cumulative Remedies

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents, and the provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 Survival of Obligations

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Agreement.

17.05 Controlling Law

A. This Contract is to be governed by the law of the state in which the Project is located.

*

**

SECTION 00800

SUPPLEMENTARY CONDITIONS

TABLE OF CONTENTS

<u>Article Number</u>	<u>Title</u>
1	DEFINITIONS AND TERMINOLOGY
2	PRELIMINARY MATTERS
3	CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE
4	AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; REFERENCE POINTS
5	BONDS AND INSURANCE
6	CONTRACTOR'S RESPONSIBILITIES
8	OWNER'S RESPONSIBILITIES
9	ENGINEER'S STATUS DURING CONSTRUCTION
11	COST OF THE WORK; CASH ALLOWANCES; UNIT PRICE WORK
12	CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES
13	TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK
14	PAYMENTS TO CONTRACTOR AND COMPLETION
15	SUSPENSION OF WORK AND TERMINATION
17	MISCELLANEOUS

SUPPLEMENTARY CONDITIONS

AMENDMENTS TO GENERAL CONDITIONS

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract (No. 1910-8, 1996 edition) and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.

ARTICLE 1. DEFINITIONS AND TERMINOLOGY

Add the following language at the beginning of definition 1.01 A.12 entitled "Contract Documents" in the General Conditions:

"The Advertisement for Bids, Instructions to Bidders, State Regulations, ..."

Delete the words "The individual or entity named as such in the Agreement" in 1.01.A.19 and insert the following in their place:

"The individual or entity duly appointed by the Owner to undertake the duties and powers herein assigned to the Engineer, acting either directly or through duly appointed representatives."

Delete the words "and who is identified as such in the Supplementary Conditions" at the end of definition 1.01 A.20, entitled "ENGINEER'S Consultant."

Delete definition 1.01 A.41 entitled "Specifications" in the General Conditions in its entirety and insert the following in its place:

"Sections included under Division 1 through Division 3 of the Contract Documents."

ARTICLE 2. PRELIMINARY MATTERS

SC-2.03

Add paragraph 2.03B:

Notwithstanding the time limitations provided in paragraph 2.03A, the OWNER may desire to commence the Contract Times later than the sixtieth day after the bid opening. The OWNER and CONTRACTOR, upon mutual agreement, may extend the commencement of the Contract Times to any date that they elect. OWNER must obtain CONTRACTOR's approval for extending the time beyond the dates/times stated in the Contract Documents.

SC-2.05

Delete paragraph 2.05C of the General Conditions in its entirety and insert the following in its place:

“C. Evidence of Insurance: CONTRACTOR shall deliver to OWNER, with a copy to the ENGINEER, Certificates of Insurance within 10 days after receipt of the notice of the acceptance of bid (and other evidence requested by OWNER) which CONTRACTOR is required to purchase and maintain in accordance with the requirements of Article 5.”

ARTICLE 3. CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

SC-3.01

Add the following sentence at the end of Paragraph 3.01A of the General Conditions:

“...by all. Each and every provision of law and clause required by law to be inserted in these Contract Documents shall be deemed to be inserted herein, and they shall be read and enforced as though it were included herein, and if through mistake or otherwise, any such provision is not inserted, or if not correctly inserted, then upon the application of either party, the Contract Documents shall forthwith be physically amended to make such insertion.”

ARTICLE 4. AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS;
REFERENCE POINTS

SC-4.02

Delete the term “Supplementary Conditions” of paragraph 4.02 A of the General Conditions and replace it with “Contract Documents”.

SC-4.04

Change “of” to “or” on line 6 of paragraph 4.04 B.2 of the General Conditions.

Delete the following words from lines 8 and 9 of paragraph 4.04 B.2 of the General Conditions:

“...or not shown or indicated with reasonable accuracy...”

SC-4.05

Add a new paragraph immediately after paragraph 4.05A of the General Conditions which is to read as follows:

"B. ENGINEER may check the lines, elevations and reference marks set by CONTRACTOR, and CONTRACTOR shall correct any errors disclosed by such check. Such a check shall

not be considered as approval of CONTRACTOR's work and shall not relieve CONTRACTOR of the responsibility for construction of the entire Work in accordance with the Contract Documents. CONTRACTOR shall furnish personnel to assist ENGINEER in checking lines and grades."

ARTICLE 5. BONDS AND INSURANCE

NOTICE TO CONTRACTOR:

1. Proof of Insurance coverage shall be furnished to the OWNER in accordance with the schedule for submittal of Bonds and Agreements.
2. Additionally refer to Article 2. PRELIMINARY MATTERS, Paragraph SC-2.05.C

SC-5.01

Insert these sentences following SC-5.01.A: The Surety Company providing the bonds shall have a rating of A or better within the Best Key Rating Guide and be licensed by the Massachusetts Division of Insurance. The CONTRACTOR shall pay the premiums for such Bonds.

SC-5.03

Delete the second sentence in paragraph 5.03A of the General Conditions, which begins "OWNER shall deliver to...."

SC-5.04

The limits of liability for the insurance required by paragraph 5.04A of the General Conditions shall provide coverage for not less than the following amounts or greater where required by law:

5.04 A.1 and 5.04 A.2 Workers' Compensation.

(1)	Worker's Compensation per	Statutory Requirements
(2)	Coverage B - Employer's Liability	\$100,000/\$500,000/\$100,000

5.04 A.3, 5.04 A.4 and 5.04 A.5 Commercial General Liability Limits shall include coverage for Independent Contractors (also known as Owners and Contractors Protective Liability), explosion, collapse and underground hazard coverage (XCU), broad form property damage, blanket contractual liability and products/completed operations. The general aggregate limits shall be endorsed so that they respond on a per project and per location basis.

Limits:

\$1,000,000 each occurrence

\$2,000,000 general aggregate

\$2,000,000 products/completed operations aggregate

5.04 A.6 Automobile Liability for owned, hired and non-owned vehicles:

- | | | | |
|-----|-----------------|-------------|--------------------------|
| (1) | Bodily injury: | \$1,000,000 | Combined single
limit |
| (2) | Property damage | \$1,000,000 | Combined single
limit |

A. Engineer and Owner shall be named as Additional Insured, and so stated on contractors General Liability and Umbrella Liability certificates of insurance.

Delete paragraph 5.04.B.5 in its entirety and insert the following in its place:

“5. contains a provision that notice of cancellation of insurance be delivered in accordance with policy provisions. In addition, the CONTRACTOR and/or its insurance broker/agent shall immediately notify the OWNER and ENGINEER should any insurance coverage be cancelled. The CONTRACTOR shall immediately stop work on the Project and shall not resume work until the CONTRACTOR provides evidence, to the OWNER and ENGINEER, in the form of an acceptable insurance certificate, of new insurance coverage that replaces all cancelled coverage that is required for the Project.”

Add two new paragraphs immediately after paragraph 5.04B of the General Conditions which are to read as follows:

“C. The CONTRACTOR shall also provide:

1. CONTRACTOR shall, as a minimum, purchase and maintain excess liability insurance in the umbrella form with a combined single limit of not less than \$5,000,000 per occurrence and in the aggregate. Evidence of such excess liability shall be delivered to OWNER in accordance with paragraph 2.05C in the form of a certificate indicating the policy numbers and limits of liability of all underlying insurance.

- A. General Liability, Workers' Compensation, Automobile Liability and Umbrella Liability Policies will contain waivers of subrogation in favor of the Engineer and Owner.
2. If the aggregate limits of liability indicated in CONTRACTOR' insurance provided in accordance with paragraphs 5.03 and 5.04 are not sufficient to cover all claims for damages arising from his operations under this Contract and from any other work performed by him or if the commercial general liability insurance policy of insurance does not provide that the general aggregate limits apply on a per project and per location basis, CONTRACTOR shall have the policy amended so that the aggregate limits of liability required by this Contract will be available to cover all claims for damages due to operations under this Contract."

SC-5.05

Delete paragraph 5.05 of the General Conditions in its entirety.

Delete paragraph 5.06B of the General Conditions in its entirety.

Delete Paragraph 5.06C of the General Conditions in its entirety.

Delete paragraph 5.06D of the General Conditions in its entirety.

Delete paragraph 5.06E of the General Conditions in its entirety.

SC-5.07

Amend the last sentence of paragraph 5.07A of the General Conditions by striking out the words "held by OWNER as trustee or." As so amended, paragraph 5.07A remains in effect.

SC-5.08

Delete paragraph 5.08A of the General Conditions in its entirety.

Delete paragraph 5.08B of the General Conditions in its entirety.

SC-5.09

Delete paragraph 5.09A of the General Conditions in its entirety and insert the following in its place:

"A. If OWNER has any objection to the coverage afforded by or other provisions of the insurance required to be purchased and maintained by CONTRACTOR in accordance with this

Article 5 on the basis of its not complying with the Contract Documents, OWNER will notify CONTRACTOR in writing thereof within thirty days of the date of delivery of such certificates to OWNER in accordance with paragraph 2.05C. CONTRACTOR will provide such additional information in respect of insurance provided by him as OWNER may reasonably request."

ARTICLE 6. CONTRACTOR'S RESPONSIBILITIES

SC-6.01

Delete paragraph 6.01B of the General Conditions in its entirety and replace with the following:

"B. At the site of the Work the CONTRACTOR shall employ a full-time construction superintendent or foreman who shall have full authority to act for the CONTRACTOR. It is understood that such representative shall be acceptable to the ENGINEER and shall be one who will be continued in the capacity for the particular job involved unless the representative ceases to be on the CONTRACTOR's payroll. If at any time during the Work the representative is deemed by the ENGINEER to be no longer acceptable, the representative shall be promptly replaced by the CONTRACTOR. All communications to the superintendent shall be as binding as if given to the CONTRACTOR."

SC-6.04

Add the following paragraph after paragraph 6.04A.2 of the General Conditions:

"B. The CONTRACTOR's resident superintendent shall attend monthly progress meetings at the site of the work with the ENGINEER and others as appropriate to review schedule status and such other pertinent subjects as may be listed on the agenda by the ENGINEER."

SC-6.05

Revise the second sentence of Paragraph A to read as follows:

"Unless the specification indicates that a proprietary item is called for, other items of material or equipment or material or equipment of other suppliers may be submitted to ENGINEER for review under the circumstances described below."

SC-6.17

In paragraph 6.17 E.1 of the General Conditions, delete the word "timely" from the first line.

SC-6.20

Delete paragraph 6.20A of the General Conditions in its entirety and replace with the following:

"A. To the fullest extent permitted by law, the CONTRACTOR shall indemnify and hold harmless the OWNER, the ENGINEER, ENGINEER's consultants, and any of their officers, directors, employees, agents, affiliates, subsidiaries and partners from and against all claims, damages, losses and expenses, including but not limited to attorney's fees, arising out of or resulting from the performance of the Work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including loss of use resulting therefrom, but only to the extent caused in whole or in part by acts or omissions of the CONTRACTOR, a subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall apply to any such claims, damages, losses and expenses which arise and/or are incurred by any person or entity either during the performance of the Work and/or after completion of construction. Nothing in this paragraph shall be construed to negate, abridge, or reduce other rights or obligations of indemnity or contribution which would otherwise exist as to a party or person indemnified hereunder. CONTRACTOR hereby assumes the responsibility and liability for injury to or death of any and all persons, including the CONTRACTOR's employees, and for any and all damage to property caused by, resulting from, or arising out of any act, omission or neglect on the part of the CONTRACTOR, or of any Subcontractor or of anyone directly or indirectly employed by any of them or of anyone for whose acts, any of them may be liable. The Contractor hereby acknowledges its obligation under the foregoing paragraph to indemnify the Engineer and Owner against judgments suffered because of the contractor's work and to assume the cost of defending the Engineer and Owner against claims as described in the foregoing paragraph."

Delete paragraph 6.20C of the General Conditions in its entirety.

ARTICLE 8. OWNER'S RESPONSIBILITIES

SC-8.06

Delete paragraph 8.06A of the General Conditions in its entirety.

ARTICLE 9. ENGINEER'S STATUS DURING CONSTRUCTION

SC-9.01

Add a new paragraph 9.01B after paragraph 9.01A of the General Conditions, which is to read as follows:

"B. Nothing contained in the Contract Documents shall be construed to create a contractual relationship of any kind (1) between the ENGINEER and CONTRACTOR, (2) between the

OWNER and a Subcontractor or Subcontractors, or (3) between any person or entities other than the OWNER and CONTRACTOR. The ENGINEER shall, however, be entitled to performance and enforcement of obligations under the CONTRACT DOCUMENTS intended to facilitate performance of the ENGINEER'S duties."

ARTICLE 11. COST OF THE WORK; CASH ALLOWANCES; UNIT PRICE WORK

Delete Article 11 of the General Conditions in its entirety and replace with the following:

"A. The unit price of an item of Unit Price work shall be subject to reevaluation and adjustment under the following conditions:

- (1) If the total extended bid price [Estimated Quantity times the Bid Unit Price] of a particular item of Unit Price Work amounts to 5 percent or more of the Original Contract Price and the variation in the quantity of the particular item of Unit Price Work performed by CONTRACTOR differs by more than 15 percent from the estimated quantity of such item indicated in the Agreement;
and
- (2) If there is no corresponding adjustment with respect to any other item of work; and
- (3) If CONTRACTOR believes that CONTRACTOR has incurred additional expense as a result thereof, CONTRACTOR may make a claim for an adjustment in the Contract Price in accordance with Article 11 if the parties are unable to agree as to the effect of any such variations in the quantity of Unit Price Work performed. If OWNER believes that the quantity variation entitles OWNER to an adjustment in the unit price, OWNER shall be entitled to an adjustment in the unit price in an amount determined by the ENGINEER. ENGINEER shall not be liable in connection with any determination relating to adjustments which is rendered in good faith."

ARTICLE 12. CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

SC-12.01

Delete paragraph 12.01 in its entirety.

SC-12.06

Add the following new paragraphs after paragraph 12.06 of the General Conditions:

"12.07 Liquidated Damages:

- A. If the CONTRACTOR shall neglect, fail or refuse to complete the work within the time herein specified, or any proper extension thereof granted by the OWNER, then the

CONTRACTOR does hereby agree, as a part consideration for the awarding of this Contract, to pay to the OWNER the amount specified in the Contract, not as a penalty but as liquidated damages for such breach of contract as hereinafter set forth, for each and every calendar day that the Contract shall be in default after the time stipulated in the Contract for completing the work. Such damages may be retained from time to time by the OWNER from progress payments or any amounts owing to the CONTRACTOR, or otherwise collected.

- B. The said amount is fixed and agreed upon by and between the CONTRACTOR and the OWNER because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the OWNER would in such event sustain, and said amount is agreed to be the amount of damages which the OWNER would sustain and said amount shall be retained from time to time by the OWNER from current periodical estimates.
- C. It is further agreed that time is of the essence of each and every portion of this Contract and of the specifications wherein as definite and certain length of times if fixed for the performance of any act whatsoever; and where under the Contract an additional time is allowed for the completion of any work, the new time limit fixed by such extension shall be of the essence of this Contract. Provided that the CONTRACTOR shall not be charged with liquidated damages of any excess cost when the OWNER determines that the CONTRACTOR is without fault and the CONTRACTOR's reasons for the time extension are acceptable to the OWNER; Provided, further, that the CONTRACTOR shall not be charged with liquidated damages or any excess cost when the delay in completion of the work is due:
 - 1) to any preference, priority or allocation order duly issued by the Government;
 - 2) to unforeseeable cause beyond the control and without the fault or negligence of the CONTRACTOR, including, but not restricted to, acts of God, or of the public enemy, acts of the OWNER, acts of another CONTRACTOR in the performance of a contract with the OWNER, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and severe weather; and
 - 3) to any delays of subcontractors or suppliers occasioned by any of the causes specified in subsections C (1) and C (2) above;
- D. Provided, further, that the CONTRACTOR shall, within thirty (30) days from the beginning of such delay, unless the OWNER shall grant a further period of time prior to the date of final settlement of the Contract, notify the OWNER, in writing, of the causes of the delay, who shall ascertain the facts and extent of the delay and notify the CONTRACTOR within a reasonable time of its decision in the matter."

ARTICLE 13. TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

SC-13.07

Delete paragraph 13.07A of the General Conditions and insert the following in its place:

- “A. If within one year after the date of Substantial Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any work is found to be defective, CONTRACTOR shall promptly, without cost to OWNER and in accordance with OWNER's written instructions: (i) correct such defective work, or, if it has been rejected by OWNER, remove it from the site and replace it with work that is not defective, and (ii) satisfactorily correct or remove and replace any damage to other work or the work of others therefrom. If CONTRACTOR does not begin the repairs within ten (10) days of receipt of written notification and promptly comply with the terms of OWNER's written instructions, or in an emergency where delay would cause serious risk, loss or damage, OWNER may have the defective work corrected or the rejected work removed and replaced, and all claims, costs, losses and damages caused by or resulting from such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by CONTRACTOR.”

SC-13.09

Revise paragraph 13.09A of the General Conditions

- A. Delete the word “seven” and replace it with the word “ten” so that it reads “after ten days written notice to CONTRACTOR.”

ARTICLE 14. PAYMENTS TO CONTRACTOR AND COMPLETION

SC-14.02

Delete paragraph 14.02A.3 and insert the following in its place:

- "3. Retainage with respect to progress payments will be five percent or, if stipulated, the maximum allowed by law."

Add Paragraph 4. to read as follows:

- “4. The CONTRACTOR shall submit Weekly Payroll Records Report and Statement of Compliance verifying compliance with the Minimum Prevailing Wage Law, MGL ch. 149,

Sections 26-27H. These Statements of Compliance shall be submitted as a condition of payment for work performed during the period the reports apply.”

SC-14.03

Delete paragraph 14.03A in its entirety and insert the following in its place:

"A. CONTRACTOR warrants and guarantees that title to all work, material and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to OWNER no later than at the time of Application for Payment free and clear of all liens. CONTRACTOR shall provide written transfer of title and a certified paid invoice provided by the supplier."

ARTICLE 15. SUSPENSION OF WORK AND TERMINATION

SC-15.02

Add a new paragraph immediately after paragraph 15.02 A.4 of the General Conditions which is to read as follows:

"5. If the Work to be done under this Contract shall be abandoned, or if this Contract or any part thereof shall be sublet, without the previous written consent of OWNER, or if the contract or any claim thereunder shall be assigned by CONTRACTOR otherwise than as herein specified;"

ARTICLE 17. MISCELLANEOUS

SC-17.06, 17.07, 17.08, 17.09

Add the following new paragraphs after paragraph 17.05 of the General Conditions:

"17.06 Assignment:

A. The CONTRACTOR shall not assign the whole or any part of this Contract or any moneys due or to become due hereunder until thirty (30) days prior notice in writing has been given to the OWNER of the intention to assign, which notice shall state the identity and address of the prospective assignee. No assignment shall be made without the OWNER's prior written consent. Such consent shall not be unreasonably withheld. In case the CONTRACTOR assigns all or any part of the moneys due or to become due under this Contract, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assignee in and to any moneys due or to become due to the CONTRACTOR shall be subject to prior claims of all persons, firms and corporations of services rendered or materials supplied for the performance of the work called for in this Contract.”

17.07 Liability

It is understood and agreed that members of the OWNER or the ENGINEER or any agent or employees of the OWNER signing this Agreement shall not be personally liable hereunder for any action incurred in connection with this Agreement.

17.08 State Statutes and Regulations

See Section 00830 for further modifications of the General Conditions due to state statutes and regulations.

17.09 Severability

If any provision of this Agreement shall be invalid or unenforceable to any extent or in any application, then the remainder of this Agreement and of such terms and conditions, except to such extent or in such application, shall not be affected thereby, and each and every term and condition of this Agreement shall be valid and enforced to the fullest extent and in the broadest application permitted by law."

END OF SECTION

SECTION 00830

STATE STATUTES AND REGULATIONS
COMMONWEALTH OF MASSACHUSETTS

A. REVISIONS TO GENERAL CONDITIONS

1. Definitions
2. Subsurface Conditions Found Different
3. Subcontracting
4. Permits
5. Contractor Records
6. Massachusetts Sales and Use Tax
7. Clarifications and Interpretations
8. Change of Contract Price
9. Payments
10. Suspension of Work and Termination
11. Labor Classification and Minimum Wage Rates

B. OTHER REGULATORY REQUIREMENTS

1. Working Hours
2. Commonwealth of Massachusetts Supplemental Equal Employment Opportunity, Non-Discrimination and Affirmative Action Program
3. DEP Community Sound Level Criteria
4. OSHA 10 Hour Certification Requirements

ATTACHMENT A - Wage Rates

ATTACHMENT B

Excerpts from Chapter 149, Chapter 30 and Chapter 82 of the Massachusetts General Law

ATTACHMENT D

Change Orders

A. REVISIONS TO GENERAL CONDITIONS:

1. Definitions

The term "AWARDING AUTHORITY," as used herein, shall be considered to be synonymous with the term "OWNER," described in definition 1.01 A.30.

Delete definition 1.01 A.43 entitled "Substantial Completion" in the General Conditions in its entirety and insert the following in its place:

"Substantial Completion shall be interpreted in accordance with Massachusetts General Law Chapter 30, Section 39G or 39K as appropriate."

2. Subsurface Conditions Found Different

Add the following sentence to the end of paragraph 4.03A of the General Conditions:

"...to do so. Adjustments resulting from subsurface or latent physical conditions will be in accordance with Massachusetts General Law Chapter 30, Section 39N."

3. Subcontracting

Add the following language at the end of paragraph 6.06F of the General Conditions:

"Except as required otherwise by Massachusetts General Law Chapter 149, Section 44F, for Work governed by Chapter 149, sections 44A through 44H.

4. Permits

Delete paragraph 6.08A of the General Conditions in its entirety and insert the following in its place:

"A. Unless otherwise provided for in Section 00890 PERMITS, the AWARDING AUTHORITY shall be responsible for identifying and obtaining all federal, state, and local permits required by the nature and location of construction, including but not limited to railroad permits, building construction permits, and permits for street and highway cuts and openings. CONTRACTOR shall be responsible for obtaining all permits required of its equipment, work force, or particular operations (such as blasting) in the performance of the Work and not otherwise specified to be obtained by the AWARDING AUTHORITY. These permit fees shall be paid by CONTRACTOR. CONTRACTOR shall pay all governmental charges and inspection fees necessary for

the prosecution of the Work, which are applicable at the time of opening of bids, or, if there are no Bids, on the Effective Date of the Agreement."

5. Contractor Records

Add a new paragraph immediately after paragraph 6.09C of the General Conditions, which is to read as follows:

"D. The CONTRACTOR shall comply with all applicable provisions Chapter 30, Section 39R of the Massachusetts General Laws regarding, CONTRACTOR's records."

6. Massachusetts Sales and Use Tax

Add the following paragraph after paragraph 6.10A of the General Conditions:

"B. The materials and supplies to be used by the CONTRACTOR in the Work of this Contract are exempt from the Sales and Use Tax of the Commonwealth of Massachusetts. The AWARING AUTHORITY tax exemption certificate number will be furnished to the CONTRACTOR."

7. Clarifications and Interpretations

Add the following language at the end of paragraph 9.04A of the General Conditions:

"The ENGINEER'S interpretation will be made in accordance with the requirements of Massachusetts General Law Chapter 30, Section 39P."

8. Change of Contract Price

Delete paragraphs 11.01, 11.02 and 12.01 of the General Conditions, having to do with Change of Contract Price. Changes in contract price will be governed by the section called "Change Orders," in Attachment D, Section 00830 and Article 11 in the Supplementary Conditions.

9. Payments

Delete paragraph 14.02B.1 of the General Conditions in its entirety and insert the following in its place:

"1. Progress Payments will be made in accordance with Massachusetts General Law Chapter 30, Section 39G, or 39K, as applicable."

Add the following new paragraph following paragraph 14.02C.1 of the General Conditions:

“2. The CONTRACTOR shall make payments to Subcontractors in accordance with the requirements of Massachusetts General Law Chapter 30, Section 39F.”

Delete paragraph 14.07B of the General Conditions in its entirety and insert the following in its place:

"1. If, on the basis of the ENGINEER's observation of the Work during construction and final inspection and, upon the ENGINEER's review of the final Application for Payment and accompanying documentation, the ENGINEER is satisfied that the Work has been completed and that the CONTRACTOR's other obligations under the Contract Documents have been fulfilled, the ENGINEER will indicate in writing its recommendation of payment and present the Application to the AWARDING AUTHORITY for payment. Thereupon the ENGINEER will give written notice to the AWARDING AUTHORITY and the CONTRACTOR that the Work is acceptable subject to the provisions of paragraph 14.15. Otherwise, the ENGINEER will return the Application to CONTRACTOR, indicating in writing the reasons for refusing to recommend final payment. In such case the CONTRACTOR shall make the necessary corrections and resubmit the Application. If the Application and accompanying documentation are appropriate as to form and substance, the AWARDING AUTHORITY shall in accordance with the applicable provisions of the Massachusetts General Laws, make payment to the CONTRACTOR."

10. Suspension of Work and Termination

Delete paragraph 15.01A of the General Conditions in its entirety and insert the following in its place:

"A. The AWARDING AUTHORITY may order, at any time and without cause, the CONTRACTOR to suspend or delay the Work in accordance with Massachusetts General Law Chapter 30, Section 39O."

11. Labor Classifications and Minimum Wage Rates

Add the following paragraphs under the heading "Wage Rates" after paragraph 17.09 of the Supplementary Conditions:

"17.11 Wage Rates

A. Minimum Wage Rates as determined by the Commissioner of the Division of Occupational Safety of the Executive Office of Labor and Workforce Development under the provisions of Massachusetts General Laws Chapter 149, Sections 26-27D apply to this project. A copy of the wage schedule is included in Attachment A of Section 00830. If, after the Notice of Award, it becomes necessary to employ any person in a trade or occupation not classified in the wage determinations, such person shall be paid at not less than such rates as shall be determined by the Commissioner. Such approved minimum rate shall be

retroactive to the time of the initial employment of such person in such trade or occupation. The CONTRACTOR shall notify the AWARDING AUTHORITY of its intention to employ persons in trades or occupations not classified in the wage determinations as soon as possible in order to allow sufficient time for the AWARDING AUTHORITY to obtain approved rates for such trades or occupations.

- B. The schedule of wages referred to above are minimum rates only, and the AWARDING AUTHORITY will not consider any claims for additional compensation made by CONTRACTOR because of payment by the CONTRACTOR of any wage rate in excess of the applicable rate contained in the Contract.
- C. The said schedule of wages shall continue to be the minimum rates to be paid during the life of this Agreement, except in the case of the duration of this Agreement exceeding one year, when the Contractor will be responsible for requesting and obtaining updated minimum wage rates from the Owner before the one-year anniversary of the project's start date, and a legible copy of said schedule shall be kept posted in a conspicuous place at the site of the Work.
- D. CONTRACTOR and subcontractors shall submit a copy of weekly payroll records to the AWARDING AUTHORITY and the AWARDING AUTHORITY shall retain the records for a minimum of three years."

B. OTHER REGULATORY REQUIREMENTS:

1. Working Hours

No laborer, workman, mechanic, foreman, or inspector, working within the Commonwealth, in the employ of the CONTRACTOR, subcontractor, or other person doing or contracting to do the whole or a part of the work contemplated by this contract, shall be required or permitted to work more than eight hours in any one day or more than forty-eight hours in any one week, or more than six days in any one week, except in cases of emergency.

2. Commonwealth of Massachusetts Supplemental Equal Employment Opportunity, Non-Discrimination and Affirmative Action Program.

The Contractor shall abide by the Commonwealth of Massachusetts Supplemental Equal Employment Opportunity, Non-Discrimination and Affirmative Action Program, which is attached in its entirety on pages 00830-C.

3. DEP Community Sound Level Criteria

The Community Sound Level Criteria as established by the Commonwealth of Massachusetts' Department of Environmental Protection (DEP) must be conformed to

prior to the AWARDING AUTHORITY's acceptance of the structure. The following sound level criteria must be met at the construction site:

- A. The increase in the broadband noise level shall not be in excess of ten (10) dB(A) above ambient at the station boundary. The ambient level is defined as the A-weighted noise level that is exceeded ninety (90) percent of the time measured during the period in question.
- B. The primary noise source(s) shall not produce a puretone condition. Puretone is any given octave band center frequency that exceeds the two adjacent center frequencies by three (3) or more decibels.

4. OSHA 10 Hour Certification Requirements

All employees of the Contractor who work at the jobsite must have received OSHA 10 Hour safety training, and have proof, at the jobsite, of being certified by OSHA as having received the training. The Contractor must provide written proof (copy of OSHA card each employee is required to carry is preferred) of this certification for every employee with submission of the first certified payroll report for each employee.

END OF SECTION

ATTACHMENT B

Excerpts from Chapters 30, 82 and 149 of the Massachusetts General Laws

NOTICE - These are **NOT** the official versions of the Massachusetts General Laws (MGL). While reasonable efforts have been made to assure the accuracy of the excerpts provided, do not rely on this information without first checking an official edition of the MGL. If you are in need of legal advice or counsel, consult a lawyer. These excerpts include amendments to the General Laws passed through September 30, 2010. For laws enacted since that time, see the 2010 Session Laws.

Certain excerpts from the Massachusetts General Laws are applicable to Construction contracts. Attention is directed to the following Sections of Chapter 149 as amended.

Section 25. Lodging, board and trade of public employees; statute part of employment contract.

"Every employee in public work shall lodge, board, and trade where and with whom he elects; and no person or his agents or employees under contract with the commonwealth, a county, city or town, or with a department, board, commission or officer acting therefor, for the doing of public work shall directly or indirectly require, as a condition of employment therein, that the employee shall lodge, board or trade at a particular place or with a particular person. This section shall be made a part of the contract for such employment."

Section 26. Public works; preference to veterans and citizens; wages.

"In the employment of mechanics and apprentices, teamsters, chauffeurs and laborers in the construction of public works by the commonwealth, or by a county, town, authority or district, or by persons contracting or subcontracting for such works, preference shall first be given to citizens of the commonwealth who have been residents of the commonwealth for at least six months at the commencement of their employment who are male veterans as defined in clause Forty-third of section seven of chapter four, and who are qualified to perform the work to which the employment relates; and secondly, to citizens of the commonwealth generally who have been residents of the commonwealth for at least six months at the commencement of their employment, and if they cannot be obtained in sufficient numbers, then to citizens of the United States, and every contract for such work shall contain a provision to this effect..."

Section 34. Public contracts; stipulation as to hours and days of work; void contracts.

"Every contract, except for the purchase of material or supplies, involving the employment of laborers, workmen, mechanics, foremen or inspectors, to which the commonwealth or any county or any town, subject to section thirty, is a party, shall contain a stipulation that no laborer, workman, mechanic, foreman or inspector working within the commonwealth, in the employ of the contractor, subcontractor or other person doing or contracting to do the whole or a part of the work

contemplated by the contract, shall be required or permitted to work more than eight hours in any one-day or more than forty-eight hours in any one week, or more than six-days in any one week, except in cases of emergency, or, in case any town subject to section thirty-one is a party to such a contract, more than eight hours in any one-day, except as aforesaid..."

Section 34A. Contracts for public works; workers' compensation insurance; breach of contract; enforcement and violation of statute.

"Every contract for the construction, alteration, maintenance, repair or demolition of, or addition to, any public building or other public works for the commonwealth or any political subdivision thereof shall contain stipulations requiring that the contractor shall, before commencing performance of such contract, provide by insurance for the payment of compensation and the furnishing of other benefits under chapter one hundred and fifty-two to all persons to be employed

under the contract, and that the contractor shall continue such insurance in full force and effect during the term of the contract. No officer or agent contracting in behalf of the commonwealth or any political subdivision thereof shall award such a contract until he has been furnished with sufficient proof of compliance with the aforesaid stipulations. Failure to provide and continue in force such insurance as aforesaid shall be deemed a material breach of the contract and shall operate as an immediate termination thereof. No cancellation of such insurance, whether by the insurer or by the insured, shall be valid unless written notice thereof is given by the party proposing cancellation to the other party and to the officer or agent who awarded the contract at least fifteen-days prior to the intended effective date thereof, which date shall be expressed in said notice.

Notice of cancellation sent by the party proposing cancellation by registered mail, postage prepaid, with a return receipt of the addressee requested, shall be a sufficient notice..."

Section 34B. Contracts for public works; wages for reserve police officer.

"Every contract for the construction, alteration, maintenance, repair or demolition of, or addition to, any public works for the commonwealth or any political subdivision thereof shall contain stipulations requiring that the contractor shall pay to any reserve police officer employed by him in any city or town the prevailing rate of wage paid to regular police officers in such city or town."

Whenever general bids are invited for a contract subject to Section 44A, the following provision applies:

Section 44E. Filing of bids; forms; modular buildings. Second paragraph of subdivision (2), clause E.

"The undersigned hereby certifies that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work; that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and that he will comply fully with all laws and regulations applicable to awards made subject to section 44A."

For projects estimated to cost more than \$20,000, the following provision applies to sub-bidders:

Section 44F. Plans and specifications; sub-bids; form; contents. First paragraph of clause I of subdivision (2) of section 44F.

“The undersigned hereby certifies that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work; that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and that he will comply fully with all laws and regulations applicable to awards of subcontracts subject to section 44F.”

Section 44G. Allowances; alternates; weather protection devices.

“(A) “Allowance” as used herein means a sum of money covering one or more items of labor or labor and materials which is designated in bid documents and which general bidders are required to use in computing their bids. The use of such allowances shall be prohibited in the award of any contract subject to the provisions of section forty-four A. Whenever the designer is unable to supply specifications for any item prior to the solicitation of bids, such item shall not be included in any contract subject to the provisions of section forty-four A. The awarding authority shall solicit bids for every such item separately pursuant to the provisions of section forty-four A after specifications for that item are prepared.

(B) Every alternate contained in the form for general bids shall be listed in a numerical sequence in order of priority. When the awarding authority decides to consider alternates in determining the lowest eligible and responsible bidder, the awarding authority shall consider the alternates in descending numerical sequence, such that no single alternate shall be considered unless every alternate preceding it on the list has been added to or subtracted from the base bid price.

(C) The use of options other than alternates in bid documents or bid forms subject to section forty-four A shall be prohibited under all circumstances.

(D) Every contract subject to section forty-four A shall include specifications for the installation of weather protection and shall require that the contractor shall install the same and that he shall furnish adequate heat in the area so protected during the months of November through March. Standards for such specifications shall be established by the commissioner or his designee.”

Section 44J. Invitations to bid; notice; contents; violations; penalty.

"(1) No public agency or authority of the commonwealth or any political subdivision thereof shall award any contract for which competitive bids are required pursuant to section forty-four A of this chapter or section thirty-nine M of chapter thirty, or for which competitive proposals are required pursuant to subsection (4) of section forty-four E of this chapter or section eleven C of chapter twenty-five A, unless a notice inviting bids or proposals therefor shall have been posted no less than one week prior to the time specified in such notice for the receipt of said bids or proposals in a conspicuous place in or near the offices of the awarding authority, and shall have remained posted until the time so specified, and unless such notice shall also have been published at least once not less than two weeks prior to the time so specified in the central register published by the secretary of state pursuant to section twenty A of chapter nine and in a newspaper of general circulation in the locality of the proposed project. Said notice shall also be published at such other times and in such other newspapers or trade periodicals as the commissioner of capital asset management and maintenance may require, having regard to the locality of the work involved.

(2) Said notice shall specify the time and place where plans and specification of the proposed work may be had; the time and place of submission of general bids; and the time and place for opening of the general bids. For contracts subject to the provisions of section forty-four A to H, inclusive, of this chapter, said notice shall also specify the time and place for submission of filed sub-bids, where required pursuant to section forty-four F; and the time and place for opening of said filed sub-bids.

Said notice shall also provide sufficient facts concerning the nature and scope of such project, the type and elements of construction, and such other information as will assist applicants in deciding to bid on such contract.

(3) No contract or preliminary plans and specifications shall be split or divided for the purpose of evading the provisions of this section.

(4) General bids and filed sub-bids for any contract subject to this section shall be in writing and shall be opened in public at the time and place specified in the posted or published notice, and after being so opened shall be open to public inspection.

(5) The provisions of this section shall not apply to any transaction between the commonwealth and any public service corporation.

(6) The provisions of this section may be waived in cases of extreme emergency involving the health and safety of the people and their property, upon the written approval of said commissioner. The written approval shall contain a description of the circumstances and the reasons for the commissioner's determination.

(7) Whoever violates any provision of this section shall be punished by a fine of not more than ten thousand dollars or by imprisonment in the state prison for not more than three years or in a jail or house of correction for not more than two and one-half years, or by both said fine and imprisonment;

and in the event of final conviction, said person shall be incapable of holding any office of honor, trust or profit under the commonwealth or under any county, district or municipal agency.

Each and every person who shall cause or conspire to cause any contract or preliminary plans and specifications to be split or divided for the purpose of evading the provisions of this section shall forfeit and pay to the commonwealth, a political subdivision thereof or other awarding authority subject to this section, the sum of not more than five thousand dollars and, in addition, such person or persons shall pay, apportioned among them, double the amount of damages which the commonwealth or political subdivision thereof or other awarding authority may have sustained by reason of the doing of such act, together with the costs of the action.

(8) If an awarding authority rejects all general bids or does not receive any general bids, and advertises for a second opening of general bids with the original filed sub-bids as set forth in subsection (1) of section forty-four E the notice for receipt of such general bids may be published in the central register and elsewhere as required not less than one week prior to the time specified for such second opening of general bids.

(9) No request for proposals or invitation for bids issued under sections 38A ½ to 38O, inclusive, of chapter 7, section 11C of chapter 25A, section 39M of chapter 30, this section and sections 44A to 44H, inclusive, shall be advertised if the awarding authority's cost estimate is greater than 1 year old."

Attention is directed to the following sections of Chapter 30 of the General Laws of Massachusetts as amended to date.

Section 39F. Construction contracts; assignment and subrogation; subcontractor defined; enforcement of claim for direct payment; deposit; reduction of disputed amounts.

"(1) Every contract awarded pursuant to sections forty-four A to L inclusive, of chapter one hundred and forty-nine shall contain the following subparagraphs (a) through (i) and every contract awarded pursuant to section thirty-nine M of chapter thirty shall contain the following subparagraphs (a) through (h) and in each case those subparagraphs shall be binding between the general contractor and each subcontractor.

(a) Forthwith after the general contractor receives payment on account of a periodic estimate, the general contractor shall pay to each subcontractor the amount paid for the labor performed and the materials furnished by that subcontractor, less any amount specified in any court proceedings barring such payment and also less any amount claimed due from the subcontractor by the general contractor.

(b) Not later than the sixty-fifth-day after each subcontractor substantially completes his work in accordance with the plans and specifications, the entire balance due under the subcontract less amounts retained by the awarding authority as the estimated cost of completing the incomplete and unsatisfactory items of work, shall be due the subcontractor; and the awarding authority shall pay

that amount to the general contractor. The general contractor shall forthwith pay to the subcontractor the full amount received from the awarding authority less any amount specified in any court proceedings barring such payment and also less any amount claimed due from the subcontractor by the general contractor.

(c) Each payment made by the awarding authority to the general contractor pursuant to subparagraphs (a) and (b) of this paragraph for the labor performed and the materials furnished by a subcontractor shall be made to the general contractor for the account of that subcontractor; and the awarding authority shall take reasonable steps to compel the general contractor to make each such payment to each such subcontractor. If the awarding authority has received a demand for direct payment from a subcontractor for any amount which has already been included in a payment to the general contractor or which is to be included in a payment to the general contractor for payment to the subcontractor as provided in subparagraphs (a) and (b), the awarding authority shall act upon the demand as provided in this section.

(d) If, within seventy-days after the subcontractor has substantially completed the subcontract work, the subcontractor has not received from the general contractor the balance due under the subcontract including any amount due for extra labor and materials furnished to the general contractor, less any amount retained by the awarding authority as the estimated cost of completing the incomplete and unsatisfactory items of work, the subcontractor may demand direct payment of that balance from the awarding authority. The demand shall be by a sworn statement delivered to or sent by certified mail to the awarding authority, and a copy shall be delivered to or sent by certified mail to the general contractor at the same time. The demand shall contain a detailed breakdown of the balance due under the subcontract and also a statement of the status of completion of the subcontract work. Any demand made after substantial completion of the subcontract work shall be valid even if delivered or mailed prior to the seventieth day after the subcontractor has substantially completed the subcontract work. Within ten days after the subcontractor has delivered or so mailed the demand to the awarding authority and delivered or so mailed a copy to the general contractor, the general contractor may reply to the demand. The reply shall be by a sworn statement delivered to or sent by certified mail to the awarding authority and a copy shall be delivered to or sent by certified mail to the subcontractor at the same time. The reply shall contain a detailed breakdown of the balance due under the subcontract including any amount due for extra labor and materials furnished to the general contractor and of the amount due for each claim made by the general contractor against the subcontractor.

(e) Within fifteen days after receipt of the demand by the awarding authority, but in no event prior to the seventieth day after substantial completion of the subcontract work, the awarding authority shall make direct payment to the subcontractor of the balance due under the subcontract including any amount due for extra labor and materials furnished to the general contractor, less any amount (i) retained by the awarding authority as the estimated cost of completing the incomplete or unsatisfactory items of work, (ii) specified in any court proceedings barring such payment, or (iii) disputed by the general contractor in the sworn reply; provided, that the awarding authority shall not deduct from a direct payment any amount as provided in part (iii) if the reply is not sworn to, or for

which the sworn reply does not contain the detailed breakdown required by subparagraph (d). The awarding authority shall make further direct payments to the subcontractor forthwith after the removal of the basis for deductions from direct payments made as provided in parts (i) and (ii) of this subparagraph.

(f) The awarding authority shall forthwith deposit the amount deducted from a direct payment as provided in part (iii) of subparagraph (e) in an interest-bearing joint account in the names of the general contractor and the subcontractor in a bank in Massachusetts selected by the awarding authority or agreed upon by the general contractor and the subcontractor and shall notify the general contractor and the subcontractor of the date of the deposit and the bank receiving the deposit. The bank shall pay the amount in the account, including accrued interest, as provided in an agreement between the general contractor and the subcontractor or as determined by decree of a court of competent jurisdiction.

(g) All direct payments and all deductions from demands for direct payments deposited in an interest-bearing account or accounts in a bank pursuant to subparagraph (f) shall be made out of amounts payable to the general contractor at the time of receipt of a demand for direct payment from a subcontractor and out of amounts which later become payable to the general contractor and in the order of receipt of such demands from subcontractors. All direct payments shall discharge the obligation of the awarding authority to the general contractor to the extent of such payment.

(h) The awarding authority shall deduct from payments to a general contractor amounts which, together with the deposits in interest-bearing accounts pursuant to subparagraph (f), are sufficient to satisfy all unpaid balances of demands for direct payment received from subcontractors. All such amounts shall be earmarked for such direct payments, and the subcontractors shall have a right in such deductions prior to any claims against such amounts by creditors of the general contractor.

(i) If the subcontractor does not receive payment as provided in subparagraph (a) or if the general contractor does not submit a periodic estimate for the value of the labor or materials performed or furnished by the subcontractor and the subcontractor does not receive payment for same when due less the deductions provided for in subparagraph (a), the subcontractor may demand direct payment by following the procedure in subparagraph (d) and the general contractor may file a sworn reply as provided in that same subparagraph. A demand made after the first day of the month following that for which the subcontractor performed or furnished the labor and materials for which the subcontractor seeks payment shall be valid even if delivered or mailed prior to the time payment was due on a periodic estimate from the general contractor. Thereafter the awarding authority shall proceed as provided in subparagraph (e), (f), (g), and (h).

(2) Any assignment by a subcontractor of the rights under this section to a surety company furnishing a bond under the provisions of section twenty-nine of chapter one hundred forty-nine shall be invalid. The assignment and subrogation rights of the surety to amounts included in a demand for direct payment which are in the possession of the awarding authority or which are on

deposit pursuant to subparagraph (f) of paragraph (1) shall be subordinate to the rights of all subcontractors who are entitled to be paid under this section and who have not been paid in full.

(3) "Subcontractor" as used in this section (i) for contracts awarded as provided in sections forty-four A to forty-four H, inclusive, of chapter one hundred forty-nine shall mean a person who files a sub-bid and receives a subcontract as a result of that filed sub-bid or who is approved by the awarding authority in writing as a person performing labor or both performing labor and furnishing materials pursuant to a contract with the general contractor, (ii) for contracts awarded as provided in paragraph (a) of section thirty-nine M of chapter thirty shall mean a person approved by the awarding authority in writing as a person performing labor or both performing labor and furnishing materials pursuant to a contract with the general contractor, and (iii) for contracts with the commonwealth not awarded as provided in forty-four A to forty-four H, inclusive, of chapter one hundred forty-nine shall also mean a person contracting with the general contractor to supply materials used or employed in a public works project for a price in excess of five thousand dollars.

(4) A general contractor or a subcontractor shall enforce a claim to any portion of the amount of a demand for direct payment deposited as provided in subparagraph (f) of paragraph 1 by a petition in equity in the superior court against the other and the bank shall not be a necessary party. A subcontractor shall enforce a claim for direct payment or a right to require a deposit as provided in subparagraph (f) of paragraph 1 by a petition in equity in the superior court against the awarding authority and the general contractor shall not be a necessary party. Upon motion of any party the court shall advance for speedy trial any petition filed as provided in this paragraph. Sections fifty-nine and fifty-nine B of chapter two hundred thirty-one shall apply to such petitions. The court shall enter an interlocutory decree upon which execution shall issue for any part of a claim found due pursuant to sections fifty-nine and fifty-nine B and, upon motion of any party, shall advance for speedy trial the petition to collect the remainder of the claim. Any party aggrieved by such interlocutory decree shall have the right to appeal therefrom as from a final decree. The court shall not consolidate for trial the petition of any subcontractor with the petition of one or more subcontractors or the same general contract unless the court finds that a substantial portion of the evidence of the same events during the course of construction (other than the fact that the claims sought to be consolidated arise under the same general contract) is applicable to the petitions sought to be consolidated and that such consolidation will prevent unnecessary duplication of evidence. A decree in any such proceeding shall not include interest on the disputed amount deposited in excess of the interest earned for the period of any such deposit. No person except a subcontractor filing a demand for direct payment for which no funds due the general contractor are available for direct payment shall have a right to file a petition in court of equity against the awarding authority claiming a demand for direct payment is premature and such subcontractor must file the petition before the awarding authority has made a direct payment to the subcontractor and has made a deposit of the disputed portion as provided in part (iii) of subparagraph (e) and in subparagraph (f) of paragraph (1).

(5) In any petition to collect any claim for which a subcontractor has filed a demand for direct payment the court shall, upon motion of the general contractor, reduce by the amount of any deposit

of a disputed amount by the awarding authority as provided in part (iii) of subparagraph (e) and in subparagraph (f) of paragraph (1) any amount held under a trustee writ or pursuant to a restraining order or injunction.”

Section 39G. Completion of public works; semi-final and final estimates; payments; extra work; disputed items.

"Upon substantial completion of the work required by a contract with the commonwealth, or any agency or political subdivision thereof, for the construction, reconstruction, alteration, remodeling, repair or improvement of public ways, including bridges and other highway structures, sewers and water mains, airports and other public works, the contractor shall present in writing to the awarding authority its certification that the work has been substantially completed. Within twenty-one days thereafter, the awarding authority shall present to the contractor either a written declaration that the work has been substantially completed or an itemized list of incomplete or unsatisfactory work items required by the contract sufficient to demonstrate that the work has not been substantially completed.

The awarding authority may include with such list a notice setting forth a reasonable time, which shall not in any event be prior to the contract completion date, within which the contractor must achieve substantial completion of the work. In the event that the awarding authority fails to respond, by presentation of a written declaration or itemized list as aforesaid, to the contractor's certification within the twenty-one-day period, the contractor's certification shall take effect as the awarding authority's declaration that the work has been substantially completed.

Within sixty-five days after the effective date of a declaration of substantial completion, the awarding authority shall prepare and forthwith send to the contractor for acceptance a substantial completion estimate for the quantity and price of the work done and all but one percent retainage on that work, including the quantity, price and all but one percent retainage for the undisputed part of each work item and extra work item in dispute but excluding the disputed part thereof, less the estimated cost of completing all incomplete and unsatisfactory work items and less the total periodic payments made to date for the work. The awarding authority also shall deduct from the substantial completion estimate an amount equal to the sum of all demands for direct payment filed by subcontractors and not yet paid to subcontractors or deposited in joint accounts pursuant to section thirty-nine F, but no contract subject to said section thirty-nine F shall contain any other provision authorizing the awarding authority to deduct any amount by virtue of claims asserted against the contract by subcontractors, material suppliers or others.

If the awarding authority fails to prepare and send to the contractor any substantial completion estimate required by this section on or before the date herein above set forth, the awarding authority shall pay to the contractor interest on the amount which would have been due to the contractor pursuant to such substantial completion estimate at the rate of three percentage points above the rediscount rate then charged by the Federal Reserve Bank of Boston from such date to the date on which the awarding authority sends that substantial completion estimate to the contractor for acceptance or to the date of payment therefor, whichever occurs first. The awarding authority shall include the amount of such interest in the substantial completion estimate.

Within fifteen-days after the effective date of the declaration of substantial completion, the awarding authority shall send to the contractor by certified mail, return receipt requested, a complete list of all incomplete or unsatisfactory work items, and, unless delayed by causes beyond his control, the contractor shall complete all such work items within forty-five-days after the receipt of such list or before the then contract completion date, whichever is later. If the contractor fails to complete such work within such time, the awarding authority may, subsequent to seven-days' written notice to the contractor by certified mail, return receipt requested, terminate the contract and complete the incomplete or unsatisfactory work items and charge the cost of same to the contractor.

Within thirty-days after receipt by the awarding authority of a notice from the contractor stating that all of the work required by the contract has been completed, the awarding authority shall prepare and forthwith send to the contractor for acceptance a final estimate for the quantity and price of the work done and all retainage on that work less all payments made to date, unless the awarding authority's inspection shows that work items required by the contract remain incomplete or unsatisfactory, or that documentation required by the contract has not been completed. If the awarding authority fails to prepare and send to the contractor the final estimate within thirty-days after receipt of notice of completion, the awarding authority shall pay to the contractor interest on the amount which would have been due to the contractor pursuant to such final estimate at the rate hereinabove provided from the thirtieth-day after such completion until the date on which the awarding authority sends the final estimate to the contractor for acceptance or the date of payment therefor, whichever occurs first, provided that the awarding authority's inspection shows that no work items required by the contract remain incomplete or unsatisfactory. Interest shall not be paid hereunder on amounts for which interest is required to be paid in connection with the substantial completion estimate as hereinabove provided. The awarding authority shall include the amount of the interest required to be paid hereunder in the final estimate.

The awarding authority shall pay the amount due pursuant to any substantial completion or final estimate within thirty-five-days after receipt of written acceptance for such estimate from the contractor and shall pay interest on the amount due pursuant to such estimate at the rate hereinabove provided from that thirty-fifth-day to the date of payment. Within 15 days, 30 days in the case of the commonwealth, after receipt from the contractor, at the place designated by the awarding authority, if such place is so designated, of a periodic estimate requesting payment of the amount due for the preceding periodic estimate period, the awarding authority shall make a periodic payment to the contractor for the work performed during the preceding periodic estimate period and for the materials not incorporated in the work but delivered and suitably stored at the site, or at some location agreed upon in writing, to which the contractor has title or to which a subcontractor has title and has authorized the contractor to transfer title to the awarding authority, upon certification by the contractor that he is the lawful owner and that the materials are free from all encumbrances. The awarding authority shall include with each such payment interest on the amount due pursuant to such periodic estimate at the rate herein above provided from the due date. In the case of periodic payments, the contracting authority may deduct from its payment a retention based on its estimate of the fair value of its claims against the contractor, a retention for direct payments to subcontractors

based on demands for same in accordance with the provisions of section thirty-nine F, and a retention to secure satisfactory performance of the contractual work not exceeding five per cent of the approved amount of any periodic payment, and the same right to retention shall apply to bonded subcontractors entitled to direct payment under section thirty-nine F of chapter thirty; provided, that a five per cent value of all items that are planted in the ground shall be deducted from the periodic payments until final acceptance.

No periodic, substantial completion or final estimate or acceptance or payment thereof shall bar a contractor from reserving all rights to dispute the quantity and amount of, or the failure of the awarding authority to approve a quantity and amount of, all or part of any work item or extra work item.

Substantial completion, for the purposes of this section, shall mean either that the work required by the contract has been completed except for work having a contract price of less than one percent of the then adjusted total contract price, or substantially all of the work has been completed and opened to public use except for minor incomplete or unsatisfactory work items that do not materially impair the usefulness of the work required by the contract."

Section 39I. Deviations from plans and specifications.

"Every contractor having a contract for the construction, alteration, maintenance, repair or demolition of, or addition to, any public building or public works for the commonwealth, or of any political subdivision thereof, shall perform all the work required by such contract in conformity with the plans and specifications contained therein. No wilful and substantial deviation from said plans and specifications shall be made unless authorized in writing by the awarding authority or by the engineer or architect in charge of the work who is duly authorized by the awarding authority to approve such deviations. In order to avoid delays in the prosecution of the work required by such contract such deviation from the plans or specifications may be authorized by a written order of the awarding authority or such engineer or architect so authorized to approve such deviation. Within thirty days thereafter, such written order shall be confirmed by a certificate of the awarding authority stating: (1) if such deviation involves any substitution or elimination of materials, fixtures or equipment, the reasons why such materials, fixtures or equipment were included in the first instance and the reasons for substitution or elimination, and, if the deviation is of any other nature, the reasons for such deviation, giving justification therefor; (2) that the specified deviation does not materially injure the project as a whole; (3) that either the work substituted for the work specified is of the same cost and quality, or that an equitable adjustment has been agreed upon between the contracting agency and the contractor and the amount in dollars of said adjustment; and (4) that the deviation is in the best interest of the contracting authority.

Such certificate shall be signed under the penalties of perjury and shall be a permanent part of the file record of the work contracted for.

Whoever violates any provision of this section willfully and with intent to defraud shall be punished by a fine of not more than five thousand dollars or by imprisonment for not more than six months, or both."

Section 39J. Public construction contracts; effect of decisions of contracting body or administrative board.

"Notwithstanding any contrary provision of any contract for the construction, reconstruction, alteration, remodeling, repair or demolition of any public building or public works by the commonwealth, or by any county, city, town, district, board, commission or other public body, when the amount of the contract is more than five thousand dollars in the case of the commonwealth and more than two thousand dollars in the case of any county, city, town, district, board, commission or other public body, a decision, by the contracting body or by any administrative board, official or agency, or by any architect or engineer, on a dispute, whether of fact or of law, arising under said contract shall not be final or conclusive if such decision is made in bad faith, fraudulently, capriciously, or arbitrarily is unsupported by substantial evidence, or is based upon error of law."

Section 39K. Public building construction contracts; payments.

"Every contract for the construction, reconstruction, alteration, remodeling, repair or demolition of any public building by the commonwealth, or by any county, city, town, district, board, commission or other public body, when the amount is more than five thousand dollars in the case of the commonwealth and more than two thousand dollars in the case of any county, city, town, district, board, commission or other public body, shall contain the following paragraph: Within fifteen-days (thirty-days in the case of the commonwealth, including local housing authorities) after receipt from the contractor, at the place designated by the awarding authority if such a place is so designated, of a periodic estimate requesting payment of the amount due for the preceding month, the awarding authority will make a periodic payment to the contractor for the work performed during the preceding month and for the materials not incorporated in the work but delivered and suitably stored at the site (or at some location agreed upon in writing) to which the contractor has title or to which a subcontractor has title and has authorized the contractor to transfer title to the awarding authority, upon certification by the contractor that he is the lawful owner and that the materials are free from all encumbrances, but less (1) a retention based on its estimate of the fair value of its claims against the contractor and less (2) a retention for direct payments to subcontractors based on demands for same in accordance with the provisions of section thirty-nine F, and less (3) a retention not exceeding five percent of the approved amount of the periodic payment. After the receipt of a periodic estimate requesting final payment and within sixty-five-days after (a) the contractor fully completes the work or substantially completes the work so that the value of the work remaining to be done is, in the estimate of the awarding authority, less than one percent of the original contract price, or (b) the contractor substantially completes the work and the awarding authority takes possession for occupancy, whichever occurs first, the awarding authority shall pay the contractor the entire balance due on the contract less, (1) a retention based on its estimate of the fair value of its claims against the contractor and of the cost of completing the incomplete and unsatisfactory items of work

and less (2) a retention for direct payments to subcontractors based on demands for same in accordance with the provisions of section thirty-nine F, or based on the record of payments by the contractor to the subcontractors under this contract if such record of payment indicates that the contractor has not paid subcontractors as provided in section thirty-nine F. If the awarding authority fails to make payment as herein provided, there shall be added to each such payment daily interest at the rate of three percentage points above the rediscount rate then charged by the Federal Reserve Bank of Boston commencing on the first-day after said payment is due and continuing until the payment is delivered or mailed to the contractor; provided, that no interest shall be due, in any event, on the amount due on a periodic estimate for final payment until fifteen-days (twenty-four-days in the case of the commonwealth) after receipt of such a periodic estimate from the contractor, at the place designated by the awarding authority if such a place is so designated. The contractor agrees to pay to each subcontractor a portion of any such interest paid in accordance with the amount due each subcontractor.

The awarding authority may make changes in any periodic estimate submitted by the contractor and the payment due on said periodic estimate shall be computed in accordance with the changes so made, but such changes or any requirement for a corrected periodic estimate shall not affect the due date for the periodic payment or the date for the commencement of interest charges on the amount of the periodic payment computed in accordance with the changes made, as provided herein; provided, that the awarding authority may, within seven-days after receipt, return to the contractor for correction, any periodic estimate which is not in the required form or which contains computations not arithmetically correct and, in that event, the date of receipt of such periodic estimate shall be the date of receipt of the corrected periodic estimate in proper form with arithmetically correct computations. The date of receipt of a periodic estimate received on a Saturday shall be the first working day thereafter. The provisions of section thirty-nine G shall not apply to any contract for the construction, reconstruction, alteration, remodeling, repair or demolition of any public building to which this section applies.

All periodic estimates shall be submitted to the awarding authority, or to its designee as set forth in writing to the contractor, and the date of receipt by the awarding authority or its designee shall be marked on the estimate. All periodic estimates shall contain a separate item for each filed subtrade and each sub-subtrade listed in sub-bid form as required by specifications and a column listing the amount paid to each subcontractor and sub-subcontractor as of the date the periodic estimate is filed. The person making payment for the awarding authority shall add the daily interest provided for herein to each payment for each day beyond the due date based on the date of receipt marked on the estimate.

A certificate of the architect to the effect that the contractor has fully or substantially completed the work shall, subject to the provisions of section thirty-nine J, be conclusive for the purposes of this section.

Notwithstanding the provisions of this section, at any time after the value of the work remaining to be done is, in the estimation of the awarding authority, less than 1 per cent of the adjusted contract

price, or the awarding authority has determined that the contractor has substantially completed the work and the awarding authority has taken possession for occupancy, the awarding authority may send to the general contractor by certified mail, return receipt requested, a complete and final list of all incomplete and unsatisfactory work items, including, for each item on the list, a good faith estimate of the fair and reasonable cost of completing such item. The general contractor shall then complete all such work items within 30 days of receipt of such list or before the contract completion date, whichever is later. If the general contractor fails to complete all incomplete and unsatisfactory work items within 45 days after receipt of such items furnished by the awarding authority or before the contract completion date, whichever is later, subsequent to an additional 14 days' written notice to the general contractor by certified mail, return receipt requested, the awarding authority may terminate the contract and complete the incomplete and unsatisfactory work items and charge the cost of same to the general contractor and such terminations shall be without prejudice to any other rights or remedies the awarding authority may have under the contract. The awarding authority shall note any such termination in the evaluation form to be filed by the awarding authority pursuant to the provisions of section 44D of chapter 149."

Section 39L. Public construction work by foreign corporations; restrictions and reports.

"The commonwealth and every county, city, town, district, board, commission or other public body which, as the awarding authority, request proposals, bids or sub-bids for any work in the construction, reconstruction, alteration, remodeling, repair or demolition of any public building or other public works (1) shall not enter into a contract for such work with, and shall not approve as a subcontractor furnishing labor and materials for a part of the work, a foreign corporation which has not filed with such awarding authority a certificate of the state secretary stating that the corporation has complied with requirements of section 15.03 of subdivision A of Part 15 of chapter 156D and the date of compliance, and further has filed all annual reports required by section 16.22 of subdivision B of Part 16 of said chapter 156D, and (2) shall report to the state secretary and to the department of corporations and taxation any foreign corporation performing work under such contract or subcontract, and any person, other than a corporation, performing work under such contract or subcontract, and residing or having a principal place of business outside the commonwealth."

Section 39M. Contracts for construction and materials; manner of awarding.

"(b) Specifications for such contracts, and specifications for contracts awarded pursuant to the provisions of said sections forty-four A to forty-four L of said chapter one hundred and forty-nine, shall be written to provide for full competition for each item of material to be furnished under the contract; except, however, that said specifications may be otherwise written for sound reasons in the public interest stated in writing in the public records of the awarding authority or promptly given in writing by the awarding authority to anyone making a written request therefor, in either instance such writing to be prepared after reasonable investigation. Every such contract shall provide that an item equal to that named or described in the said specifications may be furnished; and an item shall be considered equal to the item so named or described if, in the opinion of the awarding authority: (1) it is at least equal in quality, durability, appearance, strength and design, (2) it will perform at

least equally the function imposed by the general design for the public work being contracted for or the material being purchased, and (3) it conforms substantially, even with deviations, to the detailed requirements for the item in the said specifications.

For each item of material the specifications shall provide for either a minimum of three named brands of material or a description of material which can be met by a minimum of three manufacturers or producers, and for the equal of any one of said named or described materials."

For projects estimated to cost more than \$10,000, the following provision, section 39M subsection c, applies:

“(c) The term "lowest responsible and eligible bidder" shall mean the bidder: (1) whose bid is the lowest of those bidders possessing the skill, ability and integrity necessary for the faithful performance of the work; (2) who shall certify, that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work; (3) who shall certify that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; (4) who, where the provisions of [section 8B of chapter 29](#) apply, shall have been determined to be qualified thereunder; and (5) who obtains within 10 days of the notification of contract award the security by bond required under [section 29 of chapter 149](#); provided that for the purposes of this section the term "security by bond" shall mean the bond of a surety company qualified to do business under the laws of the commonwealth and satisfactory to the awarding authority; provided further, that if there is more than 1 surety company, the surety companies shall be jointly and severally liable.”

Section 39N. Construction contracts; equitable adjustment in contract price for differing subsurface or latent physical conditions.

"Every contract subject to section forty-four A of chapter one hundred and forty-nine or subject to section thirty-nine M of chapter thirty shall contain the following paragraph in its entirety and an awarding authority may adopt reasonable rules or regulations in conformity with that paragraph concerning the filing, investigation and settlement of such claims:

If, during the progress of the work, the contractor or the awarding authority discovers that the actual subsurface or latent physical conditions encountered at the site differ substantially or materially from those shown on the plans or indicated in the contract documents either the contractor or the contracting authority may request an equitable adjustment in the contract price of the contract applying to work affected by the differing site conditions. A request for such an adjustment shall be in writing and shall be delivered by the party making such claim to the other party as soon as possible after such conditions are discovered. Upon receipt of such a claim from a contractor, or upon its own initiative, the contracting authority shall make an investigation of such physical conditions, and, if they differ substantially or materially from those shown on the plans or indicated

in the contract documents or from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the plans and contract documents and are of such a nature as to cause an increase or decrease in the cost of performance of the work or a change in the construction methods required for the performance of the work which results in an increase or decrease in the cost of the work, the contracting authority shall make an equitable adjustment in the contract price and the contract shall be modified in writing accordingly."

Section 39O. Contracts for construction and materials; suspension, delay or interruption due to order of awarding authority; adjustment in contract price; written claim.

"Every contract subject to the provisions of section thirty-nine M of this chapter or subject to section forty-four A of chapter one hundred forty-nine shall contain the following provisions (a) and (b) in their entirety and, in the event a suspension, delay, interruption or failure to act of the awarding authority increases the cost of performance to any subcontractor, that subcontractor shall have the same rights against the general contractor for payment for an increase in the cost of his performance as provisions (a) and (b) give the general contractor against the awarding authority, but nothing in provisions (a) and (b) shall in any way change, modify or alter any other rights which the general contractor or the subcontractor may have against each other.

(a) The awarding authority may order the general contractor in writing to suspend, delay, or interrupt all or any part of the work for such period of time as it may determine to be appropriate for the convenience of the awarding authority; provided however, that if there is a suspension, delay or interruption for fifteen-days or more due to a failure of the awarding authority to act within the time specified in this contract, the awarding authority shall make an adjustment in the contract price for any increase in the cost of performance of this contract but shall not include any profit to the general contractor on such increase; and provided further, that the awarding authority shall not make any adjustment in the contract price under this provision for any suspension, delay, interruption or failure to act to the extent that such is due to any cause for which this contract provides for an equitable adjustment of the contract price under any other contract provisions.

(b) The general contractor must submit the amount of a claim under provision (a) to the awarding authority in writing as soon as practicable after the end of the suspension, delay, interruption or failure to act and, in any event, not later than the date of final payment under this contract and, except for costs due to a suspension order, the awarding authority shall not approve any costs in the claim incurred more than twenty-days before the general contractor notified the awarding authority in writing of the act or failure to act involved in the claim."

Section 39P. Contracts for construction and materials; awarding authority's decisions on interpretation of specifications, etc.; time limit; notice.

"Every contract subject to section thirty-nine M of this chapter or section forty-four A of chapter one hundred forty-nine which requires the awarding authority, any official, its architect or engineer to make a decision on interpretation of the specifications, approval of equipment, material or any other

approval, or progress of the work, shall require that the decision be made promptly and, in any event, no later than thirty-days after the written submission for decision; but if such decision requires extended investigation and study, the awarding authority, the official, architect or engineer shall, within thirty-days after the receipt of the submission, give the party making the submission written notice of the reasons why the decision cannot be made within the thirty-day period and the date by which the decision will be made."

Section 39Q. Contracts for capital facility construction; contents; annual claims report.

"(1) Every contract awarded by any state agency as defined by section thirty-nine A of chapter seven for the construction, reconstruction, alteration, remodeling, repair or demolition of any capital facility as defined by the aforesaid section thirty-nine A shall contain the following subparagraphs (a) through (d) in their entirety:

(a) Disputes regarding changes in and interpretations of the terms or scope of the contract and denials of or failures to act upon claims for payment for extra work or materials shall be resolved according to the following procedures, which shall constitute the exclusive method for resolving such disputes. Written notice of the matter in dispute shall be submitted promptly by the claimant to the chief executive official of the state agency which awarded the contract or his designee. No person or business entity having a contract with a state agency shall delay, suspend, or curtail performance under that contract as a result of any dispute subject to this section. Any disputed order, decision or action by the agency or its authorized representative shall be fully performed or complied with pending resolution of the dispute.

(b) Within thirty days of submission of the dispute to the chief executive official of the state agency or his designee, he shall issue a written decision stating the reasons therefor, and shall notify the parties of their right of appeal under this section. If the official or his designee is unable to issue a decision within thirty days, he shall notify the parties to the dispute in writing of the reasons why a decision cannot be issued within thirty days and of the date by which the decision shall issue. Failure to issue a decision within the thirty-day period or within the additional time period specified in such written notice shall be deemed to constitute a denial of the claim and shall authorize resort to the appeal procedure described below. The decision of the chief executive official or his designee shall be final and conclusive unless an appeal is taken as provided below.

(c) Within twenty-one calendar days of the receipt of a written decision or of the failure to issue a decision as stated in the preceding subparagraph, any aggrieved party may file a notice of claim for an adjudicatory hearing with the division of hearing officers or the aggrieved party may file an action directly in a court of competent jurisdiction and shall serve copies thereof upon all other parties in the form and manner prescribed by the rules governing the conduct of adjudicatory proceedings of the division of hearing officers. In the event an aggrieved party exercises his option to file an action directly in court as provided in the previous sentence, the twenty-one day period shall not apply to such filing and the period of filing such action shall be the same period otherwise applicable for filing a civil action in superior court. The appeal shall be referred to a hearing officer

experienced in construction law and shall be prosecuted in accordance with the formal rules of procedure for the conduct of adjudicatory hearings of the division of hearing officers, except as provided below. The hearing officer shall issue a final decision as expeditiously as possible, but in no event more than one hundred and twenty calendar days after conclusion of the adjudicatory hearing, unless the decision is delayed by a request for extension of time for filing post-hearing briefs or other submissions assented to by all parties. Whenever, because an extension of time has been granted, the hearing officer is unable to issue a decision within one hundred and twenty days, he shall notify all parties of the reasons for the delay and the date when the decision will issue. Failure to issue a decision within the one hundred and twenty-day period or within the additional period specified in such written notice shall give the petitioner the right to pursue any legal remedies available to him without further delay.

(d) When the amount in dispute is less than ten thousand dollars, a contractor who is party to the dispute may elect to submit the appeal to a hearing officer experienced in construction law for expedited hearing in accordance with the informal rules of practice and procedure of the division of hearing officers. An expedited hearing under this subparagraph shall be available at the sole option of the contractor. The hearing officer shall issue a decision no later than sixty days following the conclusion of any hearing conducted pursuant to this subparagraph. The hearing officer's decision shall be final and conclusive, and shall not be set aside except in cases of fraud.

(2) The commissioner of administration shall require the division of hearings officers to prepare annually a report concerning the construction contract claims submitted to the division during the preceding twelve months, in such form as the commissioner shall prescribe. The report shall contain, at a minimum, the following information: the number of claims submitted; the names of all parties to each such claim; a brief description of the claim; the date of submission and of disposition of the claim; its disposition, whether by settlement, withdrawal, default or written decision; and the number of claims currently pending. The original of the report shall be submitted to the commissioner of administration by January fifteenth, and a copy shall be filed with the state librarian and shall be a public document.”

Section 39R. Definitions; contract provisions; management and financial statements; enforcement.

“(a) The words defined herein shall have the meaning stated below whenever they appear in this section:

(1) "Contractor" means any person, corporation, partnership, joint venture, sole proprietorship, or other entity awarded a contract pursuant to sections thirty-eight A 1/2 to thirty-eight O, inclusive, of chapter seven and any contract awarded or executed pursuant to section eleven C of chapter twenty-five A, section thirty-nine M of chapter thirty, or sections forty-four A to forty-four H, inclusive, of chapter one hundred and forty-nine, which is for an amount or estimated amount greater than one hundred thousand dollars.

(2) "Contract" means any contract awarded or executed pursuant to sections thirty-eight A 1/2 to thirty-eight O, inclusive, of chapter seven and any contract awarded or executed pursuant to section eleven C of chapter twenty-five A, section thirty-nine M of chapter thirty, or sections forty-four A through forty-four H, inclusive, of chapter one hundred and forty-nine, which is for amount or estimated amount greater than one hundred thousand dollars.

(3) "Records" means books of original entry, accounts, checks, bank statements and all other banking documents, correspondence, memoranda, invoices, computer printouts, tapes, discs, papers and other documents or transcribed information of any type, whether expressed in ordinary or machine language.

(4) "Independent Certified Public Accountant" means a person duly registered in good standing and entitled to practice as a certified public accountant under the laws of the place of his residence or principal office and who is in fact independent. In determining whether an accountant is independent with respect to a particular person, appropriate consideration should be given to all relationships between the accountant and that person or any affiliate thereof. Determination of an accountant's independence shall not be confined to the relationships existing in connection with the filing of reports with the awarding authority.

(5) "Audit," when used in regard to financial statements, means an examination of records by an independent certified public accountant in accordance with generally accepted accounting principles and auditing standards for the purpose of expressing a certified opinion thereon, or, in the alternative, a qualified opinion or a declination to express an opinion for stated reasons.

(6) "Accountant's Report," when used in regard to financial statements, means a document in which an independent certified public accountant indicates the scope of the audit which he has made and sets forth his opinion regarding the financial statements taken as a whole with a listing of noted exceptions and qualifications, or an assertion to the effect that an overall opinion cannot be expressed. When an overall opinion cannot be expressed the reason therefor shall be stated. An accountant's report shall include as a part thereof a signed statement by the responsible corporate officer attesting that management has fully disclosed all material facts to the independent certified public accountant, and that the audited financial statement is a true and complete statement of the financial condition of the contractor.

(7) "Management," when used herein, means the chief executive officers, partners, principals or other person or persons primarily responsible for the financial and operational policies and practices of the contractor.

(8) Accounting terms, unless otherwise defined herein, shall have a meaning in accordance with generally accepted accounting principles and auditing standards.

(b) Subsection (a)(2) hereof notwithstanding, every agreement or contract awarded or executed pursuant to sections thirty-eight A 1/2 to thirty-eight O, inclusive, of chapter seven, or eleven C of

chapter twenty-five A, and pursuant to section thirty-nine M of chapter thirty or to section forty-four A through H, inclusive, of chapter one hundred and forty-nine, shall provide that:

(1) The contractor shall make, and keep for at least six years after final payment, books, records, and accounts which in reasonable detail accurately and fairly reflect the transactions and dispositions of the contractor, and

(2) Until the expiration of six years after final payment, the office of inspector general, and the commissioner of capital asset management and maintenance shall have the right to examine any books, documents, papers or records of the contractor or of his subcontractors that directly pertain to, and involve transactions relating to, the contractor or his subcontractors, and

(3) If the agreement is a contract as defined herein, the contractor shall describe any change in the method of maintaining records or recording transactions which materially affect any statements filed with the awarding authority, including in his description the date of the change and reasons therefor, and shall accompany said description with a letter from the contractor's independent certified public accountant approving or otherwise commenting on the changes, and

(4) If the agreement is a contract as defined herein, the contractor has filed a statement of management on internal accounting controls as set forth in paragraph (c) below prior to the execution of the contract, and

(5) If the agreement is a contract as defined herein, the contractor has filed prior to the execution of the contracts and will continue to file annually, an audited financial statement for the most recent completed fiscal year as set forth in paragraph (d) below.

(c) Every contractor awarded a contract shall file with the awarding authority a statement of management as to whether the system of internal accounting controls of the contractor and subsidiaries reasonably assures that:

(1) Transactions are executed in accordance with management's general and specific authorization;

(2) Transactions are recorded as necessary:

i. To permit preparation of financial statements in conformity with generally accepted accounting principles, and

ii. To maintain accountability for assets;

(3) Access to assets is permitted only in accordance with management's general or specific authorization; and

(4) The recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action was taken with respect to any difference.

Every contractor awarded a contract shall also file with the awarding authority a statement prepared and signed by an independent certified public accountant, stating that he/she has examined the statement of management on internal accounting controls, and expressing an opinion as to:

(1) Whether the representations of management in response to this paragraph, and paragraph (b) above are consistent with the result of management's evaluation of the system of internal accounting controls; and

(2) Whether such representations of management are, in addition, reasonable with respect to transactions and assets in amounts which would be material when measured in relation to the applicant's financial statements.

(d) Every contractor awarded a contract by the commonwealth or by any political subdivision thereof shall annually file with the commissioner of capital asset management and maintenance during the term of the contract a financial statement prepared by an independent certified public accountant on the basis of an audit by such accountant. The final statement filed shall include the date of final payment. All statements shall be accompanied by an accountant's report. Such statements shall be made available to the awarding authority upon request.

(e) The office of inspector general, the commissioner for capital asset management and maintenance and any other awarding authority shall enforce the provisions of this section. The commissioner of capital asset management and maintenance may after providing an opportunity for the inspector general and other interested parties to comment, promulgate pursuant to the provisions of chapter thirty A such rules, regulations and guidelines as are necessary to effectuate the purposes of this section. Such rules, regulations and guidelines may be applicable to all awarding authorities. A contractor's failure to satisfy any of the requirements of this section may be grounds for debarment pursuant to section forty-four C of chapter one hundred and forty-nine.

(f) Records and statements required to be made, kept or filed under the provisions of this section shall not be public records as defined in section seven of chapter four and shall not be open to public inspection; provided, however, that such records and statements shall be made available pursuant to the provisions of clause (2) of paragraph (b)."

Section 39S. Contracts for construction; requirements.

“(a) As used in this section the word "person" shall mean any natural person, joint venture, partnership corporation or other business or legal entity. Any person submitting a bid for, or signing a contract to work on, the construction, reconstruction, alteration, remodeling or repair of any public work by the commonwealth, or political subdivision thereof, or by any county, city, town, district, or housing authority, and estimated by the awarding authority to cost more than

\$10,000, and any person submitting a bid for, or signing a contract to work on, the construction, reconstruction, installation, demolition, maintenance or repair of any building by a public agency, estimated to cost more than \$10,000, shall certify on the bid, or contract, under penalties of perjury, as follows:

(1) That he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work; (2) that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and (3) that all employees to be employed in the work subject to this bid have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration.

(b) Any employee found on a worksite subject to this section without documentation of successful completion of a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration shall be subject to immediate removal.

(c) The attorney general, or his designee, shall have the power to enforce this section including the power to institute and prosecute proceedings in the superior court to restrain the award of contracts and the performance of contracts in all cases where, after investigation of the facts, he has made a finding that the award or performance has resulted in violation, directly or indirectly, of subsection (b), and he shall not be required to pay to the clerk of the court an entry fee in connection with the institution of the proceeding.”

Section 40. Discharge or release of bonds.

"Bonds given to the commonwealth, any county, city, town or political subdivision to secure the performance of contracts for the construction or repair of public buildings or other public works may be discharged or released by the awarding authority, upon such terms as it deems expedient, after the expiration of one year from the time of completion, subject to section thirty-nine K, of the work contracted to be done; provided that no claim filed under said bond is pending, and provided further, that no such bonds shall be discharged or released prior to the expiration of all special guarantees provided for in the contract unless new bonds in substitution therefor specifically relating to the unexpired guarantees shall be taken."

Attention is directed to the following sections of Chapter 82 of the General Laws of Massachusetts as amended to date.

Section 40. Definitions.

"The following words, as used in this section and sections 40A to 40E, inclusive, shall have the following meanings:

"Company", natural gas pipeline company, petroleum or petroleum products pipeline company, public utility company, cable television company, and municipal utility company or department that supply gas, electricity, telephone, communication or cable television services or private water companies within the city or town where such excavation is to be made.

"Description of excavation location", such description shall include the name of the city or town, street, way, or route number where appropriate, the name of the streets at the nearest intersection to the excavation, the number of the buildings closest to the excavation or any other description, including landmarks, utility pole numbers or other information which will accurately define the location of the excavation.

"Emergency", a condition in which the safety of the public is in imminent danger, such as a threat to life or health or where immediate correction is required to maintain or restore essential public utility service.

"Excavation", an operation for the purpose of movement or removal of earth, rock or the materials in the ground including, but not limited to, digging, blasting, augering, backfilling, test boring, drilling, pile driving, grading, plowing in, hammering, pulling in, jacking in, trenching, tunneling and demolition of structures, excluding excavation by tools manipulated only by human power for gardening purposes and use of blasting for quarrying purposes.

"Excavator", any entity including, but not limited to, a person, partnership, joint venture, trust, corporation, association, public utility, company or state or local government body which performs excavation operations.

"Premark", to delineate the general scope of the excavation or boring on the paved surface of the ground using white paint, or stakes or other suitable white markings on nonpaved surfaces. No premarking shall be acceptable if such marks can reasonably interfere with traffic or pedestrian control or are misleading to the general public. Premarking shall not be required of any continuous excavation that is over 500 feet in length.

"Safety zone", a zone designated on the surface by the use of standard color-coded markings which contains the width of the facilities plus not more than 18 inches on each side.

"Standard color-coded markings", red - electric power lines, cables, conduit or light cables; yellow - gas, oil, street petroleum, or other gaseous materials; orange - communications cables or conduit, alarm or signal lines; blue - water, irrigation and slurry lines; green - sewer and drain lines; white - premark of proposed excavation.

"System", the underground plant damage prevention system as defined in section 76D of chapter 164."

Section 40A. Excavations; notice.

"No excavator installing a new facility or an addition to an existing facility or the relay or repair of an existing facility shall, except in an emergency, make an excavation, in any public or private way, any company right-of-way or easement or any public or privately owned land or way, unless at least 72 hours, exclusive of Saturdays, Sundays and legal holidays but not more than 30 days before the proposed excavation is to be made, such excavator has premarked not more than 500 feet of the proposed excavation and given an initial notice to the system. Such initial notice shall set forth a description of the excavation location in the manner as herein defined. In addition, such initial notice shall indicate whether any such excavation will involve blasting and, if so, the date and the location at which such blasting is to occur.

The notice requirements shall be waived in an emergency as defined herein; provided, however, that before such excavation begins or during a life-threatening emergency, notification shall be given to the system and the initial point of boring or excavation shall be premarked. The excavator shall ensure that the underground facilities of the utilities in the area of such excavation shall not be damaged or jeopardized.

In no event shall any excavation by blasting take place unless notice thereof, either in the initial notice or a subsequent notice accurately specifying the date and location of such blasting shall have been given and received at least 72 hours in advance, except in the case of an unanticipated obstruction requiring blasting when such notice shall be not less than four hours prior to such

blasting. If any such notice cannot be given as aforesaid because of an emergency requiring blasting, it shall be given as soon as may be practicable but before any explosives are discharged.”

Section 40B. Designation of location of underground facilities.

“Within 72 hours, exclusive of Saturdays, Sundays and legal holidays, from the time the initial notice is received by the system or at such time as the company and the excavator agree, such company shall respond to the initial notice or subsequent notice by designating the location of the underground facilities within 15 feet in any direction of the premarking so that the existing facilities are to be found within a safety zone. Such safety zone shall be so designated by the use of standard color-coded markings. The providing of such designation by the company shall constitute prima facie evidence of an exercise of reasonable precaution by the company as required by this section; provided, however, that in the event that the excavator has given notice as aforesaid at a location at which because of the length of excavation the company cannot reasonably designate the entire location of its facilities within such 72 hour period, then such excavator shall identify for the company that portion of the excavation which is to be first made and the company shall designate the location of its facilities in such portion within 72 hours and shall designate the location of its facilities in the remaining portion of the location within a reasonable time thereafter. When an emergency notification has been given to the system, the company shall make every attempt to designate its facilities as promptly as possible.”

Section 40C. Excavator’s responsibility to maintain designation markings; damage caused by excavator.

“After a company has designated the location of its facilities at the location in accordance with section 40B, the excavator shall be responsible for maintaining the designation markings at such locations, unless such excavator requests remarking at the location due to the obliteration, destruction or other removal of such markings. The company shall then remark such location within 24 hours following receipt of such request.

When excavating in close proximity to the underground facilities of any company when such facilities are to be exposed, non-mechanical means shall be employed, as necessary, to avoid damage in locating such facility and any further excavation shall be performed employing reasonable precautions to avoid damage to any underground facilities including, but not limited to, any substantial weakening of structural or lateral support of such facilities, penetration or destruction of any pipe, main, wire or conduit or the protective coating thereof, or damage to any pipe, main, wire or conduit.

If any damage to such pipe, main, wire or conduit or its protective coating occurs, the company shall be notified immediately by the excavator responsible for causing such damage.

The making of an excavation without providing the notice required by section 40A with respect to any proposed excavation which results in any damage to a pipe, main, wire or conduit, or its

protective coating, shall be prima facie evidence in any legal or administrative proceeding that such damage was caused by the negligence of such person.”

Section 40D. Local laws requiring excavation permits; public ways.

“Nothing in this section shall affect or impair local ordinances or by-laws requiring a permit to be obtained before excavation in a public way or on private property; but notwithstanding any general or special law, ordinance or by-law to the contrary, to the extent that any permit issued under the provisions of the state building code or state fire code requires excavation by an excavator on a public way or on private property, the permit shall not be valid unless the excavator notifies the system as required pursuant to sections 40 and 40A, before the commencement of the excavation, and has complied with the permitting requirements of chapter 82A.”

Section 40E. Violations of Secs. 40A to 40E; punishment.

“Any person or company found by the department of telecommunications and energy, after a hearing, to have violated any provision of sections 40A to 40E, inclusive, shall be fined \$1000 for the first offense and not less than \$5,000 nor more than \$10,000 for any subsequent offense within 12 consecutive months as set forth by the rules of said department; provided, however, that nothing herein shall be construed to require forfeiture of any penal sum by a state or local government body for violation of section 40A or 40C; and provided, further, that nothing herein shall be construed to require the forfeiture of any penal sum by a residential property owner for the failure to premark for an excavation on such person's residential property.”

Attention is directed to the following sections of Chapter 30 of the Acts of 2009.

Section 33.

“Notwithstanding any general or special law to the contrary, the following requirements shall apply to any public works project funded by the American Recovery and Reinvestment Act of 2009 where the amount of construction costs under any contract awarded is likely to exceed \$1,000,000. For the purposes of this section, "public works" shall mean building or work the construction of which is carried on by authority of the commonwealth, or by a county, town, authority or district, or with funds of a federal agency or the commonwealth or a county, city, town, authority or district to serve the interest of the general public, regardless of whether title thereof is in the commonwealth or in a county, city, town, authority or district; provided, however, that for the purposes of this definition, "construction" shall have the meaning provided in section 27D of chapter 149 of the General Laws.

For any public works project subject to subsection (a), the specifications set forth in any request for responses shall include a requirement that, on a per project basis, not less than 20 per cent of the total hours of employees receiving an hourly wage who are directly employed on the site of the project, employed by the contractor or a subcontractor and subject to the prevailing wage, shall be performed by apprentices in bona fide apprentice training programs as provided in sections 11H and

11I of chapter 23 of the General Laws which are approved by the division of apprentice training in the executive office of labor and workforce development.

(c) During the performance of a public works project subject to subsections (a) and (b), the contractor shall submit periodic reports to the awarding authority with records indicating the total hours worked by all journeymen and apprentices in positions subject to the apprentice requirement. In any instance in which the apprentice hours do not constitute 5 per cent of the total hours of employees subject to the apprentice requirement, the contractor shall submit a plan to the awarding authority describing how the contractor shall comply with the apprentice requirement.

(d) The attorney general shall have all the necessary powers to require compliance with the requirements of subsections (a), (b) and (c) therewith, including the power to institute and prosecute proceedings in the superior court to restrain the award of contracts and the performance of contracts. Prior to award of the contract, an awarding authority may petition the attorney general for approval to adjust the requirements set forth in said subsections (a), (b) and (c). The attorney general may adjust these requirements only if he determines that compliance with these requirements is not feasible or if application of the requirements would be preempted by federal law.

(e) An awarding authority serving a low-income population may require additional specifications that address the needs of its clients including, but not limited to, preferential hiring for residents of public housing authorities for available apprenticeship positions.

(f) Subject to appropriation, the division of apprentice training shall enhance its outreach efforts to underserved populations in order to increase and diversify the number of apprentices in the commonwealth.”

Section 39.

“Any entity located in the commonwealth that receives federal funds through the American Recovery and Reinvestment Act of 2009 shall provide information as directed by the secretary of administration and finance regarding the use of the funds. The required information shall include, but not be limited to, the reporting information required by the federal government and any other information deemed necessary by the secretary to administer the American Recovery and Reinvestment Act of 2009 responsibly, efficiently and transparently. To the extent possible, the secretary shall work to streamline the reporting of this information, minimize duplication of data entry by recipients and ensure data consistency. The secretary may issue regulations to effectuate this reporting requirement.”

Section 40.

“Employers and hiring agents on all projects funded in whole or in part by the American Recovery

and Reinvestment Act of 2009 shall post notices of available employment opportunities to the commonwealth's job bank or the one-stop career centers closest to where the projects shall be located. The postings shall contain such information as directed by the secretary of labor and workforce development. The secretary may issue regulations to effectuate this job posting requirement."

END OF SECTION

CHANGE ORDERS

Policy:

This section supplements Article 12, Change of Contract Price, in the General Conditions and Supplementary Conditions.

All executed change orders submitted to the Engineer for review and processing must be prepared in accordance with the attached change order format (Appendix A) with the appropriate number of copies, calculation sheet(s) (Appendix B) and all other supporting documentation necessary for evaluation. Failure to comply with these instructions will result in delays in processing the change order.

In order to avoid possible delays with approval of change orders, at the beginning of the project and as circumstances warrant, the Contractor shall submit a list of construction equipment, identifying major pieces of equipment to be utilized on the project. The list shall include the Contractor's designation, if any, the manufacturer, model, year of manufacture, serial number, size and horsepower of equipment. The Contractor shall also provide for approval a proposed bluebook equipment rental rate development that separately lists for each piece of equipment the monthly rental rate, area adjustment factor, depreciation factor, estimated operating cost per hour and total hourly rate. In the event the Contractor fails or is unable to provide appropriate rate information the Engineer may develop equipment rental rates for use on change orders.

Payment of Change Orders:

Payment of all change orders shall be in accordance with the relevant provisions of Massachusetts General Laws, Chapter 30, Section 39G for non-building construction and Section 39K for building construction as amended from time to time.

Payment of change orders shall be made in accordance with one of the following three methods:

- A. Existing unit prices as set forth in the contract; or
 - B. Agreed upon lump sum or unit prices; or
 - C. Time and materials
- A. Payment for work for which there is a unit price in the contract:

Where the contract contains a unit price for work and the Engineer orders a change for work of the same kind as other work contained in the contract and is performed under similar

physical conditions, the Contractor shall accept full and final payment at the contract unit price(s) for the acceptable quantities. Under certain circumstances, the unit prices may be subject to revaluation and adjustment. See Article 11 in the Supplementary Conditions.

B. Payment for work or materials for which no price is contained in the contract:

If the Engineer directs, the Contractor shall submit promptly in writing to the Engineer an offer to do the required work on a lump sum or unit price basis, as specified by the Engineer. The stated price, either lump sum or unit price, shall be divided so as to show that it is the sum of:

1. The estimated cost of Labor, plus
2. Direct Labor Cost, plus
3. Material and Freight Costs, plus
4. Equipment Costs, plus
5. An amount not to exceed 20% of the sum of items 1 through 4 for overhead and profit, plus (if applicable),
6. In the case of work done by a subcontractor an amount not to exceed 7 ½%, for the general contractor of the sum of the cost (not including subcontractor's overhead and profit) of items 1 through 4 for his overhead and profit (less, if applicable),
7. Credits for work deleted from the contract, including actual costs of the deleted work plus the percentage of overhead, profit, bonds and insurance attributable to such credit amount.

C. Payment for work on a time and materials basis:

Unless an agreed lump sum and/or unit price is obtained as noted above and is so stated in the change price, the Contractor shall accept as full payment for which no agreement is contained in contract, an amount equal to:

1. The estimated cost of Labor, plus
2. The Direct Labor Costs, plus
3. Equipment Costs, plus
4. Material and Freight Costs, plus
5. An amount not to exceed 20% of the sum of items 1 through 4 for overhead and profit, plus, if applicable,
6. In the case of work done by a subcontractor an amount not to exceed 7 ½%, for the general contractor of the sum of the cost (not including subcontractor's overhead and profit) of items 1 through 4 for his overhead and profit (less, if applicable),
7. Credit for work deleted from the Contract, including actual costs of the deleted work plus the percentage of overhead, profit, bonds and insurance attributable to such credit amount.

Explanation of items 1 through 7 as outlined in "B" and "C" above:

1. Labor - Only those workers employed on the project who are doing the extra work, including the foreman in charge, are allowable. General foremen, superintendents, or other supervisory personnel are considered to be included in the overhead markup as provided in items 5 and/or 6. Hourly labor rates in excess of those as listed in the contract wage rates require documentation. As a minimum, an explanation and the appropriate copy of the certified payroll are required.
2. Direct Labor Costs - These costs are limited to those which are required in the contract document. Coverage in excess of the contract provisions, secured by the contractor/subcontractor(s) at his option, are ineligible. The following list of typical direct labor charges is provided for your assistance and is in no way intended to be complete or all encompassing:

Workman's Compensation

Federal/State: Social Security Tax and Unemployment Tax;

Health, Welfare and Pension Benefits; (this cost is included in the wage rates appearing in the Attachment A Massachusetts Wage Rates.

Liability insurance:	Bodily injury; excess umbrella; property damage; public liability
----------------------	---

Blasters insurance:	If applied to any required direct labor costs
---------------------	---

Builders risk insurance:	If applied to any required direct labor costs
--------------------------	---

Experience modification insurance:	If applied to any required direct labor costs
------------------------------------	---

Surcharges:	If applied to any required direct labor costs
-------------	---

Following award and prior to execution of a construction contract, the Contractor and filed subbidders (where applicable) shall submit for review by the Owner, documentation to establish the markup percentage(s).

The documented direct labor markup for this contract may be adjusted on an annual basis as measured from the date the contract is executed. The contract agreement will provide for the establishment of the Direct Labor Cost percentage.

3. Material and Freight - Only those materials required as a result of the change order and reasonable freight charges for delivery of same are allowable.
4. Equipment - Only the equipment required as a result of the change order is allowable. Equipment rental rates shall be governed by the current EquipmentWatch, division of Intertec Publishing [Formerly Nielson/Dataquest] Rental Rate Bluebook for Construction Equipment (the "Bluebook"). In determining the rental rate the following shall apply:
 - a. For equipment already on the project - the monthly prorated rental rate by the hourly use shall be applicable;
 - b. For equipment not on the project the daily rate, the weekly rate, or monthly rate will prevail, whichever will prove to be most cost effective. Small tools and manual equipment are examples of costs not allowable under this item. These costs are considered to be included in the overhead markup as provided in items 5 and/or 6.

(1 Month (Normal Use) = 176 hours)

- 5.& 6. Overhead and Profit - All other costs not previously mentioned are considered to be included in this item, be it for the general contractor or subcontractor(s).
7. Credits - Work deleted, material and equipment removed from the contract, stored and/or returned shall be credited to the cost of the change order, less documented costs.

This change order will be prepared in such manner as to clearly separate Eligible and Ineligible Costs (as applicable to state-funded projects).

The Contractor shall furnish itemized statements of the cost of the work ordered and shall give the Engineer access to all accounts, bills and vouchers relating thereto; and unless the Contractor shall furnish such itemized statements, and access to all accounts, bills and vouchers, he shall not be entitled to payment for any items of extra work for which such information is sought by the Engineer.

APPENDIX A

CHANGE ORDER
(Enter Project Name)
(Enter Location)

Sheet __ of

Date _____

Project No. _____

Contract No. _____

Change Order No. _____

Owner's Name: _____

Owner's Address: _____

Contractor's Name: _____

Contractor's Address: _____

Item 1:

Description of Change: _____

Reason for Change: _____

Backup Information: _____

Cost: \$ _____

Item 2

Description of Change: _____

Reason for Change: _____

Backup Information: _____

Cost: \$ _____

Change Order (Continued)
(Enter Project Name)
(Enter Location)

Sheet ___ of

Date _____

Project No. _____

Contract No. _____

Change Order No. _____

Contract Amount (As Bid) \$ _____

Amount of Previous Change Orders \$ _____

Net Change in Contract Price (this Change Order) \$ _____

Total Adjusted Contract Price (including this Change Order) \$ _____

This Change Order extends the time to complete the work by ____ calendar days.

The extended completion date is _____.

This Change Order checked by: _____
Resident Representative Date

This Change Order is requested by: _____

This Change Order is recommended by:

Consultant Engineer P.E. # Date

The undersigned agree to the terms of the Change Order.

Contractor Date

Owner Date

Certification of Appropriation under M.G.L. c.44, s.31C: Adequate funding in an amount sufficient to cover the total cost of this change order is available.

By: _____
Certification Officer (Auditor, Accountant, Treasurer) Date

Do not write below this space: this space reserved for STATE AGENCY APPROVAL

Appendix B
Example Calculation Sheet

1. Labor

Foreman	10 hours @	\$10.00/hour	\$100.00
Engineer	10 hours @	8.80/hour	85.00
Operator	10 hours @	9.50/hour	95.00
Laborers	24 hours @	7.00/hour	<u>168.00</u>
			\$448.00

2. Direct Labor Cost (use the agreed upon Direct Labor Cost)

*(30)% of \$448.

*(used for example purposes only) \$ 134.00

3. Materials & Freight

150 l.f. of 12" pipe @ \$2.00/l.f.	\$ 300.00
15 v.f. precast SMH	1,700.00
Freight (slip# enclosed)	<u>25.00</u>
	\$2,025.00

4. Equipment

1 Backhoe	10 hours @	\$ 80.00/hour	\$ 800.00
1 Truck-crane	10 hours @	100.00/hour	<u>1000.00</u>
			\$1800.00

TOTAL (items 1 through 4): \$4,407.00

5. (20%) markup for Overhead, Profit

(20%) of \$4,407 \$ 881.00

6. (7½ %) markup on subcontractor's cost for general contractor (if subcontractor is involved)

(7½ %) of \$4,407 \$ 331.00

7. Credits (deductibles) -\$323.00

TOTAL COST: \$5,296.00

Reminder: Provide support documentation as necessary i.e. vouchers, correspondence, calculation, photographs, reports.

END OF SECTION

BY-LAWS OF THE TOWN OF ARLINGTON

TITLE I

ARTICLE 16

CONSTRUCTION PROJECTS

Section 1. Women Work Force Participation

Any Town board or official in charge of a construction or reconstruction project is required to include in the contract documents the following:

- A. Contractor shall maintain as a goal on this project a not less than five percent ratio of women work force to total project hours in both the general contract and each individual filed sub-bid contract, if applicable. The preceding sentence shall be included in all construction contracts whether entered into by the Town pursuant to the provisions of M.G.L. c. 149 or M.G. L. c 30, §39M et. seq. provided however, that if entered into under Chapter 30 same shall not be deemed to apply where the projected bid price as determined by the Director of Public Works is not likely to exceed \$200,000.
- B. A Labor Scheduling Table which will be used as a tool for achieving a range of women work force participation for the entire project in both the general contract and each individual filed sub-bid contract.

Section 2. Equal Opportunity Goal Compliance

Any Town board or official in charge of a construction or reconstruction project is required to include in the contract documents the following:

- A. Before starting work, the contractors (includes the general contractor, for itself and its subcontractors, as well as all filed sub-bid contractors, if applicable) will submit plans for achievement of the equal opportunity goals of the contract. All contractors will be required to make a good faith effort to achieve these goals. The plan will indicate if the contractors expect to achieve the requirements during the first quarter. If there are reasons why the contractors do not expect to achieve the requirements during the first quarter year of the contract construction phase, then the contractors shall provide a plan calculated to address, to the extent reasonably possibly, these obstacles to a good faith effort to achieve such goals.
- B. Not more than ten days following the end of each work quarter, the contractors will report on the achievement of the goals, detailing the good faith efforts that have been made and will continue to be made and any other appropriate efforts not yet undertaken.
- C. All reports will be signed by an officer or principal of the company who has the authority to contractually obligate the company.

Section 3. Recruitment and Training

Any board, officer, committee, or other agency of the Town, which acts on behalf of the Town in making or supervising any contract, in an amount exceeding the sum of \$100,000 for the purchase of goods or services or for the construction, renovation, or repair of buildings or other improvement of real estate, may make arrangements with contractors and other interested agencies for special programs of recruitment and training in connection with the work to be performed on such contract, with the objective of promoting equal employment opportunity for members of minority groups protected by the fair employment laws of the Commonwealth and the United States. Any board, officer, committee or other Town agency may expend Town funds in carrying them out provided that appropriations specifically designed for such purposes have been voted by the Town Meeting.



CHARLES D. BAKER
Governor

KARYN E. POLITO
Lt. Governor

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DEPARTMENT OF LABOR STANDARDS

Prevailing Wage Rates

**As determined by the Director under the provisions of the
Massachusetts General Laws, Chapter 149, Sections 26 to 27H**

RONALD L. WALKER, II
Secretary

HEATHER E. ROWE
Director

Awarding Authority: Town of Arlington
Contract Number: 15-03 **City/Town:** ARLINGTON
Description of Work: Furnish all labor, materials, equipment and supervision necessary for Reconstruction of Spy Pond Tennis Courts as per specifications and requirements
Job Location: Wellington Street

Information about Prevailing Wage Schedules for Awarding Authorities and Contractors

- This wage schedule applies only to the specific project referenced at the top of this page and uniquely identified by the "Wage Request Number" on all pages of this schedule.
- An Awarding Authority must request an updated wage schedule from the Department of Labor Standards ("DLS") if it has not opened bids or selected a contractor within 90 days of the date of issuance of the wage schedule. For CM AT RISK projects (bid pursuant to G.L. c.149A), the earlier of: (a) the execution date of the GMP Amendment, or (b) the bid for the first construction scope of work must be within 90-days of the wage schedule issuance date.
- The wage schedule shall be incorporated in any advertisement or call for bids for the project as required by M.G.L. c. 149, § 27. The wage schedule shall be made a part of the contract awarded for the project. The wage schedule must be posted in a conspicuous place at the work site for the life of the project in accordance with M.G.L. c. 149 § 27. The wages listed on the wage schedule must be paid to employees performing construction work on the project whether they are employed by the prime contractor, a filed sub-bidder, or any sub-contractor.
- All apprentices working on the project are required to be registered with the Massachusetts Division of Apprentice Standards (DAS). Apprentice must keep his/her apprentice identification card on his/her person during all work hours on the project. An apprentice registered with DAS may be paid the lower apprentice wage rate at the applicable step as provided on the prevailing wage schedule. **If an apprentice rate is not listed on the prevailing wage schedule for the trade in which an apprentice is registered with the DAS, the apprentice must be paid the journeyworker's rate for the trade.**
- The wage rates will remain in effect for the duration of the project, except in the case of multi-year public construction projects. For construction projects lasting longer than one year, awarding authorities must request an updated wage schedule. Awarding authorities are required to request these updates no later than two weeks before the anniversary of the date the contract was executed by the awarding authority and the general contractor. For multi-year CM AT RISK projects, awarding authority must request an annual update no later than two weeks before the anniversary date, determined as the earlier of: (a) the execution date of the GMP Amendment, or (b) the execution date of the first amendment to permit procurement of construction services. Contractors are required to obtain the wage schedules from awarding authorities, and to pay no less than these rates to covered workers. The annual update requirement is not applicable to 27F "rental of equipment" contracts.
- Every contractor or subcontractor which performs construction work on the project is required to submit weekly payroll reports and a Statement of Compliance directly to the awarding authority by mail or email and keep them on file for three years. Each weekly payroll report must contain: the employee's name, address, occupational classification, hours worked, and wages paid. Do not submit weekly payroll reports to DLS. A sample of a payroll reporting form may be obtained at <http://www.mass.gov/dols/pw>.
- Contractors with questions about the wage rates or classifications included on the wage schedule have an affirmative obligation to inquire with DLS at (617) 626-6953.
- Employees not receiving the prevailing wage rate set forth on the wage schedule may report the violation to the Fair Labor Division of the office of the Attorney General at (617) 727-3465.
- Failure of a contractor or subcontractor to pay the prevailing wage rates listed on the wage schedule to all employees who perform construction work on the project is a violation of the law and subjects the contractor or subcontractor to civil and criminal penalties.

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
Construction						
(2 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2014	\$32.40	\$9.91	\$9.33	\$0.00	\$51.64
	06/01/2015	\$32.75	\$9.91	\$9.33	\$0.00	\$51.99
	08/01/2015	\$32.75	\$10.41	\$9.33	\$0.00	\$52.49
	12/01/2015	\$32.75	\$10.41	\$10.08	\$0.00	\$53.24
	06/01/2016	\$33.25	\$10.41	\$10.08	\$0.00	\$53.74
	08/01/2016	\$33.25	\$10.91	\$10.08	\$0.00	\$54.24
	12/01/2016	\$33.25	\$10.91	\$10.89	\$0.00	\$55.05
(3 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2014	\$32.47	\$9.91	\$9.33	\$0.00	\$51.71
	06/01/2015	\$32.82	\$9.91	\$9.33	\$0.00	\$52.06
	08/01/2015	\$32.82	\$10.41	\$9.33	\$0.00	\$52.56
	12/01/2015	\$32.82	\$10.41	\$10.08	\$0.00	\$53.31
	06/01/2016	\$33.32	\$10.41	\$10.08	\$0.00	\$53.81
	08/01/2016	\$33.32	\$10.91	\$10.08	\$0.00	\$54.31
	12/01/2016	\$33.32	\$10.91	\$10.89	\$0.00	\$55.12
(4 & 5 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2014	\$32.59	\$9.91	\$9.33	\$0.00	\$51.83
	06/01/2015	\$32.94	\$9.91	\$9.33	\$0.00	\$52.18
	08/01/2015	\$32.94	\$10.41	\$9.33	\$0.00	\$52.68
	12/01/2015	\$32.94	\$10.41	\$10.08	\$0.00	\$53.43
	06/01/2016	\$33.44	\$10.41	\$10.08	\$0.00	\$53.93
	08/01/2016	\$33.44	\$10.91	\$10.08	\$0.00	\$54.43
	12/01/2016	\$33.44	\$10.91	\$10.89	\$0.00	\$55.24
ADS/SUBMERSIBLE PILOT <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2014	\$87.36	\$9.80	\$18.17	\$0.00	\$115.33
	08/01/2015	\$90.51	\$9.80	\$18.17	\$0.00	\$118.48
AIR TRACK OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2014	\$35.35	\$7.30	\$12.95	\$0.00	\$55.60
	06/01/2015	\$36.10	\$7.30	\$12.95	\$0.00	\$56.35
	12/01/2015	\$36.85	\$7.30	\$12.95	\$0.00	\$57.10
	06/01/2016	\$37.60	\$7.30	\$12.95	\$0.00	\$57.85
	12/01/2016	\$38.60	\$7.30	\$12.95	\$0.00	\$58.85
For apprentice rates see "Apprentice- LABORER"						
ASBESTOS REMOVER - PIPE / MECH. EQUIPT. <i>HEAT & FROST INSULATORS LOCAL 6 (BOSTON)</i>	12/01/2014	\$32.48	\$10.40	\$5.95	\$0.00	\$48.83
	06/01/2015	\$33.43	\$10.40	\$5.95	\$0.00	\$49.78
	12/01/2015	\$34.38	\$10.40	\$5.95	\$0.00	\$50.73
ASPHALT RAKER <i>LABORERS - ZONE 1</i>	12/01/2014	\$34.85	\$7.30	\$12.95	\$0.00	\$55.10
	06/01/2015	\$35.60	\$7.30	\$12.95	\$0.00	\$55.85
	12/01/2015	\$36.35	\$7.30	\$12.95	\$0.00	\$56.60
	06/01/2016	\$37.10	\$7.30	\$12.95	\$0.00	\$57.35
	12/01/2016	\$38.10	\$7.30	\$12.95	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2014	\$42.39	\$10.00	\$14.30	\$0.00	\$66.69
	06/01/2015	\$43.14	\$10.00	\$14.30	\$0.00	\$67.44
	12/01/2015	\$44.39	\$10.00	\$14.30	\$0.00	\$68.69
	06/01/2016	\$45.14	\$10.00	\$14.30	\$0.00	\$69.44
	12/01/2016	\$46.39	\$10.00	\$14.30	\$0.00	\$70.69
	06/01/2017	\$47.39	\$10.00	\$14.30	\$0.00	\$71.69
	12/01/2017	\$48.39	\$10.00	\$14.30	\$0.00	\$72.69

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BACKHOE/FRONT-END LOADER	12/01/2014	\$42.39	\$10.00	\$14.30	\$0.00	\$66.69
OPERATING ENGINEERS LOCAL 4	06/01/2015	\$43.14	\$10.00	\$14.30	\$0.00	\$67.44
	12/01/2015	\$44.39	\$10.00	\$14.30	\$0.00	\$68.69
	06/01/2016	\$45.14	\$10.00	\$14.30	\$0.00	\$69.44
	12/01/2016	\$46.39	\$10.00	\$14.30	\$0.00	\$70.69
	06/01/2017	\$47.39	\$10.00	\$14.30	\$0.00	\$71.69
	12/01/2017	\$48.39	\$10.00	\$14.30	\$0.00	\$72.69
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BARCO-TYPE JUMPING TAMPER	12/01/2014	\$34.85	\$7.30	\$12.95	\$0.00	\$55.10
LABORERS - ZONE I	06/01/2015	\$35.60	\$7.30	\$12.95	\$0.00	\$55.85
	12/01/2015	\$36.35	\$7.30	\$12.95	\$0.00	\$56.60
	06/01/2016	\$37.10	\$7.30	\$12.95	\$0.00	\$57.35
	12/01/2016	\$38.10	\$7.30	\$12.95	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
BLOCK PAVER, RAMMER / CURB SETTER	12/01/2014	\$35.35	\$7.30	\$12.95	\$0.00	\$55.60
LABORERS - ZONE I	06/01/2015	\$36.10	\$7.30	\$12.95	\$0.00	\$56.35
	12/01/2015	\$36.85	\$7.30	\$12.95	\$0.00	\$57.10
	06/01/2016	\$37.60	\$7.30	\$12.95	\$0.00	\$57.85
	12/01/2016	\$38.60	\$7.30	\$12.95	\$0.00	\$58.85
For apprentice rates see "Apprentice- LABORER"						
BOILER MAKER	01/01/2010	\$37.70	\$6.97	\$11.18	\$0.00	\$55.85
BOILERMAKERS LOCAL 29						

Apprentice - BOILERMAKER - Local 29

Effective Date - 01/01/2010

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	65	\$24.51	\$6.97	\$11.18	\$0.00	\$42.66
2	65	\$24.51	\$6.97	\$11.18	\$0.00	\$42.66
3	70	\$26.39	\$6.97	\$11.18	\$0.00	\$44.54
4	75	\$28.28	\$6.97	\$11.18	\$0.00	\$46.43
5	80	\$30.16	\$6.97	\$11.18	\$0.00	\$48.31
6	85	\$32.05	\$6.97	\$11.18	\$0.00	\$50.20
7	90	\$33.93	\$6.97	\$11.18	\$0.00	\$52.08
8	95	\$35.82	\$6.97	\$11.18	\$0.00	\$53.97

Notes:

Apprentice to Journeyworker Ratio:1:5

BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)	08/01/2014	\$48.96	\$10.18	\$18.22	\$0.00	\$77.36
BRICKLAYERS LOCAL 3 (BOSTON)	02/01/2015	\$48.96	\$10.18	\$18.50	\$0.00	\$77.64
	08/01/2015	\$49.86	\$10.18	\$18.57	\$0.00	\$78.61
	02/01/2016	\$50.43	\$10.18	\$18.57	\$0.00	\$79.18
	08/01/2016	\$51.33	\$10.18	\$18.65	\$0.00	\$80.16
	02/01/2017	\$51.90	\$10.18	\$18.65	\$0.00	\$80.73

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
----------------	----------------	-----------	--------	---------	---------------------------	------------

Apprentice - BRICK/PLASTER/CEMENT MASON - Local 3 Boston

Effective Date - 08/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.48	\$10.18	\$18.22	\$0.00	\$52.88
2	60	\$29.38	\$10.18	\$18.22	\$0.00	\$57.78
3	70	\$34.27	\$10.18	\$18.22	\$0.00	\$62.67
4	80	\$39.17	\$10.18	\$18.22	\$0.00	\$67.57
5	90	\$44.06	\$10.18	\$18.22	\$0.00	\$72.46

Effective Date - 02/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.48	\$10.18	\$18.50	\$0.00	\$53.16
2	60	\$29.38	\$10.18	\$18.50	\$0.00	\$58.06
3	70	\$34.27	\$10.18	\$18.50	\$0.00	\$62.95
4	80	\$39.17	\$10.18	\$18.50	\$0.00	\$67.85
5	90	\$44.06	\$10.18	\$18.50	\$0.00	\$72.74

Notes:

Apprentice to Journeyworker Ratio:1:5

BULLDOZER/GRADER/SCRAPER	12/01/2014	\$41.99	\$10.00	\$14.30	\$0.00	\$66.29
OPERATING ENGINEERS LOCAL 4	06/01/2015	\$42.73	\$10.00	\$14.30	\$0.00	\$67.03
	12/01/2015	\$43.97	\$10.00	\$14.30	\$0.00	\$68.27
	06/01/2016	\$44.72	\$10.00	\$14.30	\$0.00	\$69.02
	12/01/2016	\$45.95	\$10.00	\$14.30	\$0.00	\$70.25
	06/01/2017	\$46.94	\$10.00	\$14.30	\$0.00	\$71.24
	12/01/2017	\$47.93	\$10.00	\$14.30	\$0.00	\$72.23

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

CAISSON & UNDERPINNING BOTTOM MAN	12/01/2014	\$35.70	\$7.30	\$13.15	\$0.00	\$56.15
LABORERS - FOUNDATION AND MARINE	06/01/2015	\$36.45	\$7.30	\$13.15	\$0.00	\$56.90
	12/01/2015	\$37.20	\$7.30	\$13.15	\$0.00	\$57.65
	06/01/2016	\$37.95	\$7.30	\$13.15	\$0.00	\$58.40
	12/01/2016	\$38.95	\$7.30	\$13.15	\$0.00	\$59.40

For apprentice rates see "Apprentice- LABORER"

CAISSON & UNDERPINNING LABORER	12/01/2014	\$34.55	\$7.30	\$13.15	\$0.00	\$55.00
LABORERS - FOUNDATION AND MARINE	06/01/2015	\$35.30	\$7.30	\$13.15	\$0.00	\$55.75
	12/01/2015	\$36.05	\$7.30	\$13.15	\$0.00	\$56.50
	06/01/2016	\$36.80	\$7.30	\$13.15	\$0.00	\$57.25
	12/01/2016	\$37.80	\$7.30	\$13.15	\$0.00	\$58.25

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
CAISSON & UNDERPINNING TOP MAN <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2014	\$34.55	\$7.30	\$13.15	\$0.00	\$55.00
	06/01/2015	\$35.30	\$7.30	\$13.15	\$0.00	\$55.75
	12/01/2015	\$36.05	\$7.30	\$13.15	\$0.00	\$56.50
	06/01/2016	\$36.80	\$7.30	\$13.15	\$0.00	\$57.25
	12/01/2016	\$37.80	\$7.30	\$13.15	\$0.00	\$58.25
For apprentice rates see "Apprentice- LABORER"						
CARBIDE CORE DRILL OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2014	\$34.85	\$7.30	\$12.95	\$0.00	\$55.10
	06/01/2015	\$35.60	\$7.30	\$12.95	\$0.00	\$55.85
	12/01/2015	\$36.35	\$7.30	\$12.95	\$0.00	\$56.60
	06/01/2016	\$37.10	\$7.30	\$12.95	\$0.00	\$57.35
	12/01/2016	\$38.10	\$7.30	\$12.95	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
CARPENTER <i>CARPENTERS -ZONE 2 (Eastern Massachusetts)</i>	09/01/2014	\$35.35	\$9.80	\$16.11	\$0.00	\$61.26
	03/01/2015	\$36.12	\$9.80	\$16.11	\$0.00	\$62.03

Apprentice - CARPENTER - Zone 2 Eastern MA

Effective Date - 09/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$17.68	\$9.80	\$1.57	\$0.00	\$29.05
2	60	\$21.21	\$9.80	\$1.57	\$0.00	\$32.58
3	70	\$24.75	\$9.80	\$11.40	\$0.00	\$45.95
4	75	\$26.51	\$9.80	\$11.40	\$0.00	\$47.71
5	80	\$28.28	\$9.80	\$12.97	\$0.00	\$51.05
6	80	\$28.28	\$9.80	\$12.97	\$0.00	\$51.05
7	90	\$31.82	\$9.80	\$14.54	\$0.00	\$56.16
8	90	\$31.82	\$9.80	\$14.54	\$0.00	\$56.16

Effective Date - 03/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$18.06	\$9.80	\$1.57	\$0.00	\$29.43
2	60	\$21.67	\$9.80	\$1.57	\$0.00	\$33.04
3	70	\$25.28	\$9.80	\$11.40	\$0.00	\$46.48
4	75	\$27.09	\$9.80	\$11.40	\$0.00	\$48.29
5	80	\$28.90	\$9.80	\$12.97	\$0.00	\$51.67
6	80	\$28.90	\$9.80	\$12.97	\$0.00	\$51.67
7	90	\$32.51	\$9.80	\$14.54	\$0.00	\$56.85
8	90	\$32.51	\$9.80	\$14.54	\$0.00	\$56.85

Notes:

Apprentice to Journeyworker Ratio:1:5

CEMENT MASONRY/PLASTERING <i>BRICKLAYERS LOCAL 3 (BOSTON)</i>	01/01/2015	\$46.27	\$10.90	\$18.71	\$1.30	\$77.18
	07/01/2015	\$47.15	\$10.90	\$18.71	\$1.30	\$78.06
	01/01/2016	\$47.81	\$10.90	\$18.71	\$1.30	\$78.72

Classification
Effective Date
Base Wage
Health
Pension
**Supplemental
Unemployment**
Total Rate
Apprentice - CEMENT MASONRY/PLASTERING - Eastern Mass (Boston)
Effective Date - 01/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.14	\$10.90	\$12.21	\$1.30	\$47.55
2	60	\$27.76	\$10.90	\$13.71	\$1.30	\$53.67
3	65	\$30.08	\$10.90	\$14.71	\$1.30	\$56.99
4	70	\$32.39	\$10.90	\$15.71	\$1.30	\$60.30
5	75	\$34.70	\$10.90	\$16.71	\$1.30	\$63.61
6	80	\$37.02	\$10.90	\$17.71	\$1.30	\$66.93
7	90	\$41.64	\$10.90	\$18.71	\$1.30	\$72.55

Effective Date - 07/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.58	\$10.90	\$12.21	\$1.30	\$47.99
2	60	\$28.29	\$10.90	\$13.71	\$1.30	\$54.20
3	65	\$30.65	\$10.90	\$14.71	\$1.30	\$57.56
4	70	\$33.01	\$10.90	\$15.71	\$1.30	\$60.92
5	75	\$35.36	\$10.90	\$16.71	\$1.30	\$64.27
6	80	\$37.72	\$10.90	\$17.71	\$1.30	\$67.63
7	90	\$42.44	\$10.90	\$18.71	\$1.30	\$73.35

Notes:

Steps 3,4 are 500 hrs. All other steps are 1,000 hrs.

Apprentice to Journeyworker Ratio:1:3

CHAIN SAW OPERATOR	12/01/2014	\$34.85	\$7.30	\$12.95	\$0.00	\$55.10
LABORERS - ZONE 1	06/01/2015	\$35.60	\$7.30	\$12.95	\$0.00	\$55.85
	12/01/2015	\$36.35	\$7.30	\$12.95	\$0.00	\$56.60
	06/01/2016	\$37.10	\$7.30	\$12.95	\$0.00	\$57.35
	12/01/2016	\$38.10	\$7.30	\$12.95	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES	12/01/2014	\$43.39	\$10.00	\$14.30	\$0.00	\$67.69
OPERATING ENGINEERS LOCAL 4	06/01/2015	\$44.14	\$10.00	\$14.30	\$0.00	\$68.44
	12/01/2015	\$45.39	\$10.00	\$14.30	\$0.00	\$69.69
	06/01/2016	\$46.14	\$10.00	\$14.30	\$0.00	\$70.44
	12/01/2016	\$47.39	\$10.00	\$14.30	\$0.00	\$71.69
	06/01/2017	\$48.39	\$10.00	\$14.30	\$0.00	\$72.69
	12/01/2017	\$49.39	\$10.00	\$14.30	\$0.00	\$73.69
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
COMPRESSOR OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2014	\$29.40	\$10.00	\$14.30	\$0.00	\$53.70
	06/01/2015	\$29.92	\$10.00	\$14.30	\$0.00	\$54.22
	12/01/2015	\$30.79	\$10.00	\$14.30	\$0.00	\$55.09
	06/01/2016	\$31.31	\$10.00	\$14.30	\$0.00	\$55.61
	12/01/2016	\$32.18	\$10.00	\$14.30	\$0.00	\$56.48
	06/01/2017	\$32.87	\$10.00	\$14.30	\$0.00	\$57.17
	12/01/2017	\$33.56	\$10.00	\$14.30	\$0.00	\$57.86

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

DELEADER (BRIDGE) <i>PAINTERS LOCAL 35 - ZONE 2</i>	01/01/2015	\$47.66	\$7.85	\$16.10	\$0.00	\$71.61
	07/01/2015	\$48.56	\$7.85	\$16.10	\$0.00	\$72.51
	01/01/2016	\$49.51	\$7.85	\$16.10	\$0.00	\$73.46
	07/01/2016	\$50.46	\$7.85	\$16.10	\$0.00	\$74.41
	01/01/2017	\$51.41	\$7.85	\$16.10	\$0.00	\$75.36

Apprentice - PAINTER Local 35 - BRIDGES/TANKS

Effective Date - 01/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.83	\$7.85	\$0.00	\$0.00	\$31.68
2	55	\$26.21	\$7.85	\$3.66	\$0.00	\$37.72
3	60	\$28.60	\$7.85	\$3.99	\$0.00	\$40.44
4	65	\$30.98	\$7.85	\$4.32	\$0.00	\$43.15
5	70	\$33.36	\$7.85	\$14.11	\$0.00	\$55.32
6	75	\$35.75	\$7.85	\$14.44	\$0.00	\$58.04
7	80	\$38.13	\$7.85	\$14.77	\$0.00	\$60.75
8	90	\$42.89	\$7.85	\$15.44	\$0.00	\$66.18

Effective Date - 07/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.28	\$7.85	\$0.00	\$0.00	\$32.13
2	55	\$26.71	\$7.85	\$3.66	\$0.00	\$38.22
3	60	\$29.14	\$7.85	\$3.99	\$0.00	\$40.98
4	65	\$31.56	\$7.85	\$4.32	\$0.00	\$43.73
5	70	\$33.99	\$7.85	\$14.11	\$0.00	\$55.95
6	75	\$36.42	\$7.85	\$14.44	\$0.00	\$58.71
7	80	\$38.85	\$7.85	\$14.77	\$0.00	\$61.47
8	90	\$43.70	\$7.85	\$15.44	\$0.00	\$66.99

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

DEMO: ADZEMAN <i>LABORERS - ZONE 1</i>	12/01/2014	\$34.75	\$7.30	\$12.95	\$0.00	\$55.00
	06/01/2015	\$35.50	\$7.30	\$12.95	\$0.00	\$55.75
	12/01/2015	\$36.25	\$7.30	\$12.95	\$0.00	\$56.50

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
DEMO: BACKHOE/LOADER/HAMMER OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2014	\$35.75	\$7.30	\$12.95	\$0.00	\$56.00
	06/01/2015	\$36.50	\$7.30	\$12.95	\$0.00	\$56.75
	12/01/2015	\$37.25	\$7.30	\$12.95	\$0.00	\$57.50
For apprentice rates see "Apprentice- LABORER"						
DEMO: BURNERS <i>LABORERS - ZONE 1</i>	12/01/2014	\$35.50	\$7.30	\$12.95	\$0.00	\$55.75
	06/01/2015	\$36.25	\$7.30	\$12.95	\$0.00	\$56.50
	12/01/2015	\$37.00	\$7.30	\$12.95	\$0.00	\$57.25
For apprentice rates see "Apprentice- LABORER"						
DEMO: CONCRETE CUTTER/SAWYER <i>LABORERS - ZONE 1</i>	12/01/2014	\$35.75	\$7.30	\$12.95	\$0.00	\$56.00
	06/01/2015	\$36.50	\$7.30	\$12.95	\$0.00	\$56.75
	12/01/2015	\$37.25	\$7.30	\$12.95	\$0.00	\$57.50
For apprentice rates see "Apprentice- LABORER"						
DEMO: JACKHAMMER OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2014	\$35.50	\$7.30	\$12.95	\$0.00	\$55.75
	06/01/2015	\$36.25	\$7.30	\$12.95	\$0.00	\$56.50
	12/01/2015	\$37.00	\$7.30	\$12.95	\$0.00	\$57.25
For apprentice rates see "Apprentice- LABORER"						
DEMO: WRECKING LABORER <i>LABORERS - ZONE 1</i>	12/01/2014	\$34.75	\$7.30	\$12.95	\$0.00	\$55.00
	06/01/2015	\$35.50	\$7.30	\$12.95	\$0.00	\$55.75
	12/01/2015	\$36.25	\$7.30	\$12.95	\$0.00	\$56.50
For apprentice rates see "Apprentice- LABORER"						
DIRECTIONAL DRILL MACHINE OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2014	\$41.99	\$10.00	\$14.30	\$0.00	\$66.29
	06/01/2015	\$42.73	\$10.00	\$14.30	\$0.00	\$67.03
	12/01/2015	\$43.97	\$10.00	\$14.30	\$0.00	\$68.27
	06/01/2016	\$44.72	\$10.00	\$14.30	\$0.00	\$69.02
	12/01/2016	\$45.95	\$10.00	\$14.30	\$0.00	\$70.25
	06/01/2017	\$46.94	\$10.00	\$14.30	\$0.00	\$71.24
	12/01/2017	\$47.93	\$10.00	\$14.30	\$0.00	\$72.23
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
DIVER <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2014	\$58.24	\$9.80	\$18.17	\$0.00	\$86.21
	08/01/2015	\$60.34	\$9.80	\$18.17	\$0.00	\$88.31
DIVER TENDER <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2014	\$41.60	\$9.80	\$18.17	\$0.00	\$69.57
	08/01/2015	\$43.10	\$9.80	\$18.17	\$0.00	\$71.07
DIVER TENDER (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2014	\$62.40	\$9.80	\$18.17	\$0.00	\$90.37
	08/01/2015	\$64.65	\$9.80	\$18.17	\$0.00	\$92.62
DIVER/SLURRY (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2014	\$87.36	\$9.80	\$18.17	\$0.00	\$115.33
	08/01/2015	\$90.51	\$9.80	\$18.17	\$0.00	\$118.48
DRAWBRIDGE OPERATOR (Construction) <i>ELECTRICIANS LOCAL 103</i>	09/01/2014	\$44.79	\$13.00	\$15.04	\$0.00	\$72.83
	03/01/2015	\$45.17	\$13.00	\$15.40	\$0.00	\$73.57
	09/01/2015	\$46.13	\$13.00	\$15.43	\$0.00	\$74.56
	03/01/2016	\$47.08	\$13.00	\$15.46	\$0.00	\$75.54
For apprentice rates see "Apprentice- ELECTRICIAN"						
ELECTRICIAN <i>ELECTRICIANS LOCAL 103</i>	09/01/2014	\$44.79	\$13.00	\$15.04	\$0.00	\$72.83
	03/01/2015	\$45.17	\$13.00	\$15.40	\$0.00	\$73.57
	09/01/2015	\$46.13	\$13.00	\$15.43	\$0.00	\$74.56
	03/01/2016	\$47.08	\$13.00	\$15.46	\$0.00	\$75.54

Classification
Effective Date
Base Wage
Health
Pension
**Supplemental
Unemployment**
Total Rate
Apprentice - ELECTRICIAN - Local 103
Effective Date - 09/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$17.92	\$13.00	\$0.54	\$0.00	\$31.46
2	40	\$17.92	\$13.00	\$0.54	\$0.00	\$31.46
3	45	\$20.16	\$13.00	\$11.33	\$0.00	\$44.49
4	45	\$20.16	\$13.00	\$11.33	\$0.00	\$44.49
5	50	\$22.40	\$13.00	\$11.67	\$0.00	\$47.07
6	55	\$24.63	\$13.00	\$12.01	\$0.00	\$49.64
7	60	\$26.87	\$13.00	\$12.35	\$0.00	\$52.22
8	65	\$29.11	\$13.00	\$12.68	\$0.00	\$54.79
9	70	\$31.35	\$13.00	\$13.02	\$0.00	\$57.37
10	75	\$33.59	\$13.00	\$13.36	\$0.00	\$59.95

Effective Date - 03/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$18.07	\$13.00	\$0.54	\$0.00	\$31.61
2	40	\$18.07	\$13.00	\$0.54	\$0.00	\$31.61
3	45	\$20.33	\$13.00	\$11.63	\$0.00	\$44.96
4	45	\$20.33	\$13.00	\$11.63	\$0.00	\$44.96
5	50	\$22.59	\$13.00	\$11.97	\$0.00	\$47.56
6	55	\$24.84	\$13.00	\$12.32	\$0.00	\$50.16
7	60	\$27.10	\$13.00	\$12.66	\$0.00	\$52.76
8	65	\$29.36	\$13.00	\$13.00	\$0.00	\$55.36
9	70	\$31.62	\$13.00	\$13.34	\$0.00	\$57.96
10	75	\$33.88	\$13.00	\$13.69	\$0.00	\$60.57

Notes :

App Prior 1/1/03; 30/35/40/45/50/55/65/70/75/80

Apprentice to Journeyworker Ratio:2:3***

 ELEVATOR CONSTRUCTOR
 ELEVATOR CONSTRUCTORS LOCAL 4

01/01/2012

\$52.45

\$8.78

\$6.96

\$0.00

\$68.19

Apprentice - ELEVATOR CONSTRUCTOR - Local 4

Effective Date - 01/01/2012

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.23	\$8.78	\$0.00	\$0.00	\$35.01
2	55	\$28.85	\$8.78	\$6.96	\$0.00	\$44.59
3	65	\$34.09	\$8.78	\$6.96	\$0.00	\$49.83
4	70	\$36.72	\$8.78	\$6.96	\$0.00	\$52.46
5	80	\$41.96	\$8.78	\$6.96	\$0.00	\$57.70

Notes:

Steps 1-2 are 6 mos.; Steps 3-5 are 1 year

Apprentice to Journeyworker Ratio:1:1

ELEVATOR CONSTRUCTOR HELPER <i>ELEVATOR CONSTRUCTORS LOCAL 4</i>	01/01/2012	\$38.59	\$8.78	\$6.96	\$0.00	\$54.33
For apprentice rates see "Apprentice - ELEVATOR CONSTRUCTOR"						
FENCE & GUARD RAIL ERECTOR <i>LABORERS - ZONE 1</i>	12/01/2014	\$34.85	\$7.30	\$12.95	\$0.00	\$55.10
	06/01/2015	\$35.60	\$7.30	\$12.95	\$0.00	\$55.85
	12/01/2015	\$36.35	\$7.30	\$12.95	\$0.00	\$56.60
	06/01/2016	\$37.10	\$7.30	\$12.95	\$0.00	\$57.35
	12/01/2016	\$38.10	\$7.30	\$12.95	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
FIELD ENG.INST.PERSON-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2014	\$39.59	\$10.00	\$14.18	\$0.00	\$63.77
	05/01/2015	\$40.32	\$10.00	\$14.18	\$0.00	\$64.50
	11/01/2015	\$40.90	\$10.00	\$14.18	\$0.00	\$65.08
	05/01/2016	\$41.79	\$10.00	\$14.18	\$0.00	\$65.97
	11/01/2016	\$42.38	\$10.00	\$14.18	\$0.00	\$66.56
	05/01/2017	\$43.26	\$10.00	\$14.18	\$0.00	\$67.44
	11/01/2017	\$43.99	\$10.00	\$14.18	\$0.00	\$68.17
	05/01/2018	\$44.70	\$10.00	\$14.18	\$0.00	\$68.88
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIELD ENG.PARTY CHIEF-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2014	\$41.02	\$10.00	\$14.18	\$0.00	\$65.20
	05/01/2015	\$41.75	\$10.00	\$14.18	\$0.00	\$65.93
	11/01/2015	\$42.34	\$10.00	\$14.18	\$0.00	\$66.52
	05/01/2016	\$43.23	\$10.00	\$14.18	\$0.00	\$67.41
	11/01/2016	\$43.83	\$10.00	\$14.18	\$0.00	\$68.01
	05/01/2017	\$44.72	\$10.00	\$14.18	\$0.00	\$68.90
	11/01/2017	\$45.45	\$10.00	\$14.18	\$0.00	\$69.63
	05/01/2018	\$46.17	\$10.00	\$14.18	\$0.00	\$70.35
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
FIELD ENG.ROD PERSON-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2014	\$21.35	\$10.00	\$14.18	\$0.00	\$45.53
	05/01/2015	\$21.78	\$10.00	\$14.18	\$0.00	\$45.96
	11/01/2015	\$22.12	\$10.00	\$14.18	\$0.00	\$46.30
	05/01/2016	\$22.64	\$10.00	\$14.18	\$0.00	\$46.82
	11/01/2016	\$22.99	\$10.00	\$14.18	\$0.00	\$47.17
	05/01/2017	\$23.52	\$10.00	\$14.18	\$0.00	\$47.70
	11/01/2017	\$23.94	\$10.00	\$14.18	\$0.00	\$48.12
	05/01/2018	\$24.37	\$10.00	\$14.18	\$0.00	\$48.55
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIRE ALARM INSTALLER <i>ELECTRICIANS LOCAL 103</i>	09/01/2014	\$44.79	\$13.00	\$15.04	\$0.00	\$72.83
	03/01/2015	\$45.17	\$13.00	\$15.40	\$0.00	\$73.57
	09/01/2015	\$46.13	\$13.00	\$15.43	\$0.00	\$74.56
	03/01/2016	\$47.08	\$13.00	\$15.46	\$0.00	\$75.54
For apprentice rates see "Apprentice- ELECTRICIAN"						
FIRE ALARM REPAIR / MAINTENANCE / COMMISSIONING <i>ELECTRICIANS LOCAL 103</i>	09/01/2014	\$33.59	\$13.00	\$13.36	\$0.00	\$59.95
	03/01/2015	\$33.88	\$13.00	\$13.70	\$0.00	\$60.58
	09/01/2015	\$34.60	\$13.00	\$13.72	\$0.00	\$61.32
	03/01/2016	\$35.31	\$13.00	\$13.74	\$0.00	\$62.05
For apprentice rates see "Apprentice- TELECOMMUNICATIONS TECHNICIAN"						
FIREMAN (ASST. ENGINEER) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2014	\$35.33	\$10.00	\$14.30	\$0.00	\$59.63
	06/01/2015	\$35.95	\$10.00	\$14.30	\$0.00	\$60.25
	12/01/2015	\$37.00	\$10.00	\$14.30	\$0.00	\$61.30
	06/01/2016	\$37.62	\$10.00	\$14.30	\$0.00	\$61.92
	12/01/2016	\$38.66	\$10.00	\$14.30	\$0.00	\$62.96
	06/01/2017	\$39.50	\$10.00	\$14.30	\$0.00	\$63.80
	12/01/2017	\$40.33	\$10.00	\$14.30	\$0.00	\$64.63
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FLAGGER & SIGNALER <i>LABORERS - ZONE 1</i>	12/01/2014	\$20.50	\$7.30	\$12.95	\$0.00	\$40.75
	06/01/2015	\$20.50	\$7.30	\$12.95	\$0.00	\$40.75
	12/01/2015	\$20.50	\$7.30	\$12.95	\$0.00	\$40.75
	06/01/2016	\$20.50	\$7.30	\$12.95	\$0.00	\$40.75
	12/01/2016	\$20.50	\$7.30	\$12.95	\$0.00	\$40.75
For apprentice rates see "Apprentice- LABORER"						
FLOORCOVERER <i>FLOORCOVERERS LOCAL 2168 ZONE 1</i>	09/01/2014	\$40.40	\$9.80	\$17.21	\$0.00	\$67.41

Classification
Effective Date
Base Wage
Health
Pension
**Supplemental
Unemployment**
Total Rate
Apprentice - FLOORCOVERER - Local 2168 Zone I
Effective Date - 09/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.20	\$9.80	\$1.79	\$0.00	\$31.79
2	55	\$22.22	\$9.80	\$1.79	\$0.00	\$33.81
3	60	\$24.24	\$9.80	\$11.84	\$0.00	\$45.88
4	65	\$26.26	\$9.80	\$11.84	\$0.00	\$47.90
5	70	\$28.28	\$9.80	\$13.63	\$0.00	\$51.71
6	75	\$30.30	\$9.80	\$13.63	\$0.00	\$53.73
7	80	\$32.32	\$9.80	\$15.42	\$0.00	\$57.54
8	85	\$34.34	\$9.80	\$15.42	\$0.00	\$59.56

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

FORK LIFT/CHERRY PICKER	12/01/2014	\$42.39	\$10.00	\$14.30	\$0.00	\$66.69
OPERATING ENGINEERS LOCAL 4	06/01/2015	\$43.14	\$10.00	\$14.30	\$0.00	\$67.44
	12/01/2015	\$44.39	\$10.00	\$14.30	\$0.00	\$68.69
	06/01/2016	\$45.14	\$10.00	\$14.30	\$0.00	\$69.44
	12/01/2016	\$46.39	\$10.00	\$14.30	\$0.00	\$70.69
	06/01/2017	\$47.39	\$10.00	\$14.30	\$0.00	\$71.69
	12/01/2017	\$48.39	\$10.00	\$14.30	\$0.00	\$72.69

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

GENERATOR/LIGHTING PLANT/HEATERS	12/01/2014	\$29.40	\$10.00	\$14.30	\$0.00	\$53.70
OPERATING ENGINEERS LOCAL 4	06/01/2015	\$29.92	\$10.00	\$14.30	\$0.00	\$54.22
	12/01/2015	\$30.79	\$10.00	\$14.30	\$0.00	\$55.09
	06/01/2016	\$31.31	\$10.00	\$14.30	\$0.00	\$55.61
	12/01/2016	\$32.18	\$10.00	\$14.30	\$0.00	\$56.48
	06/01/2017	\$32.87	\$10.00	\$14.30	\$0.00	\$57.17
	12/01/2017	\$33.56	\$10.00	\$14.30	\$0.00	\$57.86

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS)	01/01/2015	\$37.16	\$7.85	\$16.10	\$0.00	\$61.11
GLAZIERS LOCAL 35 (ZONE 2)	07/01/2015	\$38.06	\$7.85	\$16.10	\$0.00	\$62.01
	01/01/2016	\$39.01	\$7.85	\$16.10	\$0.00	\$62.96
	07/01/2016	\$39.96	\$7.85	\$16.10	\$0.00	\$63.91
	01/01/2017	\$40.91	\$7.85	\$16.10	\$0.00	\$64.86

Classification
Effective Date
Base Wage
Health
Pension
**Supplemental
Unemployment**
Total Rate
Apprentice - GLAZIER - Local 35 Zone 2
Effective Date - 01/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$18.58	\$7.85	\$0.00	\$0.00	\$26.43
2	55	\$20.44	\$7.85	\$3.66	\$0.00	\$31.95
3	60	\$22.30	\$7.85	\$3.99	\$0.00	\$34.14
4	65	\$24.15	\$7.85	\$4.32	\$0.00	\$36.32
5	70	\$26.01	\$7.85	\$14.11	\$0.00	\$47.97
6	75	\$27.87	\$7.85	\$14.44	\$0.00	\$50.16
7	80	\$29.73	\$7.85	\$14.77	\$0.00	\$52.35
8	90	\$33.44	\$7.85	\$15.44	\$0.00	\$56.73

Effective Date - 07/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.03	\$7.85	\$0.00	\$0.00	\$26.88
2	55	\$20.93	\$7.85	\$3.66	\$0.00	\$32.44
3	60	\$22.84	\$7.85	\$3.99	\$0.00	\$34.68
4	65	\$24.74	\$7.85	\$4.32	\$0.00	\$36.91
5	70	\$26.64	\$7.85	\$14.11	\$0.00	\$48.60
6	75	\$28.55	\$7.85	\$14.44	\$0.00	\$50.84
7	80	\$30.45	\$7.85	\$14.77	\$0.00	\$53.07
8	90	\$34.25	\$7.85	\$15.44	\$0.00	\$57.54

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1
HOISTING ENGINEER/CRANES/GRADALLS
OPERATING ENGINEERS LOCAL 4

12/01/2014	\$42.39	\$10.00	\$14.30	\$0.00	\$66.69
06/01/2015	\$43.14	\$10.00	\$14.30	\$0.00	\$67.44
12/01/2015	\$44.39	\$10.00	\$14.30	\$0.00	\$68.69
06/01/2016	\$45.14	\$10.00	\$14.30	\$0.00	\$69.44
12/01/2016	\$46.39	\$10.00	\$14.30	\$0.00	\$70.69
06/01/2017	\$47.39	\$10.00	\$14.30	\$0.00	\$71.69
12/01/2017	\$48.39	\$10.00	\$14.30	\$0.00	\$72.69

Classification
Effective Date
Base Wage
Health
Pension
**Supplemental
Unemployment**
Total Rate
Apprentice - OPERATING ENGINEERS - Local 4
Effective Date - 12/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$23.31	\$10.00	\$0.00	\$0.00	\$33.31
2	60	\$25.43	\$10.00	\$14.30	\$0.00	\$49.73
3	65	\$27.55	\$10.00	\$14.30	\$0.00	\$51.85
4	70	\$29.67	\$10.00	\$14.30	\$0.00	\$53.97
5	75	\$31.79	\$10.00	\$14.30	\$0.00	\$56.09
6	80	\$33.91	\$10.00	\$14.30	\$0.00	\$58.21
7	85	\$36.03	\$10.00	\$14.30	\$0.00	\$60.33
8	90	\$38.15	\$10.00	\$14.30	\$0.00	\$62.45

Effective Date - 06/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$23.73	\$10.00	\$0.00	\$0.00	\$33.73
2	60	\$25.88	\$10.00	\$14.30	\$0.00	\$50.18
3	65	\$28.04	\$10.00	\$14.30	\$0.00	\$52.34
4	70	\$30.20	\$10.00	\$14.30	\$0.00	\$54.50
5	75	\$32.36	\$10.00	\$14.30	\$0.00	\$56.66
6	80	\$34.51	\$10.00	\$14.30	\$0.00	\$58.81
7	85	\$36.67	\$10.00	\$14.30	\$0.00	\$60.97
8	90	\$38.83	\$10.00	\$14.30	\$0.00	\$63.13

Notes:
Apprentice to Journeyworker Ratio:1:6

HVAC (DUCTWORK)	08/01/2014	\$42.79	\$9.82	\$20.54	\$2.19	\$75.34
SHEETMETAL WORKERS LOCAL 17 - A	02/01/2015	\$43.69	\$9.82	\$20.54	\$2.19	\$76.24
	08/01/2015	\$44.69	\$9.82	\$20.54	\$2.19	\$77.24
	02/01/2016	\$45.69	\$9.82	\$20.54	\$2.19	\$78.24
	08/01/2016	\$46.84	\$9.82	\$20.54	\$2.19	\$79.39
	02/01/2017	\$47.94	\$9.82	\$20.54	\$2.19	\$80.49
	08/01/2017	\$49.04	\$9.82	\$20.54	\$2.19	\$81.59
	02/01/2018	\$50.19	\$9.82	\$20.54	\$2.19	\$82.74

For apprentice rates see "Apprentice- SHEET METAL WORKER"

HVAC (ELECTRICAL CONTROLS)	09/01/2014	\$44.79	\$13.00	\$15.04	\$0.00	\$72.83
ELECTRICIANS LOCAL 103	03/01/2015	\$45.17	\$13.00	\$15.40	\$0.00	\$73.57
	09/01/2015	\$46.13	\$13.00	\$15.43	\$0.00	\$74.56
	03/01/2016	\$47.08	\$13.00	\$15.46	\$0.00	\$75.54

For apprentice rates see "Apprentice- ELECTRICIAN"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
HVAC (TESTING AND BALANCING - AIR) <i>SHEETMETAL WORKERS LOCAL 17 - A</i>	08/01/2014	\$42.79	\$9.82	\$20.54	\$2.19	\$75.34
	02/01/2015	\$43.69	\$9.82	\$20.54	\$2.19	\$76.24
	08/01/2015	\$44.69	\$9.82	\$20.54	\$2.19	\$77.24
	02/01/2016	\$45.69	\$9.82	\$20.54	\$2.19	\$78.24
	08/01/2016	\$46.84	\$9.82	\$20.54	\$2.19	\$79.39
	02/01/2017	\$47.94	\$9.82	\$20.54	\$2.19	\$80.49
	08/01/2017	\$49.04	\$9.82	\$20.54	\$2.19	\$81.59
	02/01/2018	\$50.19	\$9.82	\$20.54	\$2.19	\$82.74
For apprentice rates see "Apprentice- SHEET METAL WORKER"						
HVAC (TESTING AND BALANCING -WATER) <i>PIPEFITTERS LOCAL 537</i>	09/01/2014	\$48.69	\$9.20	\$16.64	\$0.00	\$74.53
	03/01/2015	\$49.69	\$9.20	\$16.64	\$0.00	\$75.53
	09/01/2015	\$50.69	\$9.20	\$16.64	\$0.00	\$76.53
	03/01/2016	\$51.69	\$9.20	\$16.64	\$0.00	\$77.53
	09/01/2016	\$52.69	\$9.20	\$16.64	\$0.00	\$78.53
	03/01/2017	\$53.69	\$9.20	\$16.64	\$0.00	\$79.53
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
HVAC MECHANIC <i>PIPEFITTERS LOCAL 537</i>	09/01/2014	\$48.69	\$9.20	\$16.64	\$0.00	\$74.53
	03/01/2015	\$49.69	\$9.20	\$16.64	\$0.00	\$75.53
	09/01/2015	\$50.69	\$9.20	\$16.64	\$0.00	\$76.53
	03/01/2016	\$51.69	\$9.20	\$16.64	\$0.00	\$77.53
	09/01/2016	\$52.69	\$9.20	\$16.64	\$0.00	\$78.53
	03/01/2017	\$53.69	\$9.20	\$16.64	\$0.00	\$79.53
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
HYDRAULIC DRILLS <i>LABORERS - ZONE 1</i>	12/01/2014	\$35.35	\$7.30	\$12.95	\$0.00	\$55.60
	06/01/2015	\$36.10	\$7.30	\$12.95	\$0.00	\$56.35
	12/01/2015	\$36.85	\$7.30	\$12.95	\$0.00	\$57.10
	06/01/2016	\$37.60	\$7.30	\$12.95	\$0.00	\$57.85
	12/01/2016	\$38.60	\$7.30	\$12.95	\$0.00	\$58.85
For apprentice rates see "Apprentice- LABORER"						
INSULATOR (PIPES & TANKS) <i>HEAT & FROST INSULATORS LOCAL 6 (BOSTON)</i>	09/01/2014	\$43.31	\$11.25	\$12.60	\$0.00	\$67.16

Apprentice - ASBESTOS INSULATOR (Pipes & Tanks) - Local 6 Boston

Effective Date - 09/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.66	\$11.25	\$9.35	\$0.00	\$42.26
2	60	\$25.99	\$11.25	\$10.00	\$0.00	\$47.24
3	70	\$30.32	\$11.25	\$10.65	\$0.00	\$52.22
4	80	\$34.65	\$11.25	\$11.30	\$0.00	\$57.20

Notes:

Steps are 1 year

Apprentice to Journeyworker Ratio:1:4

IRONWORKER/WELDER <i>IRONWORKERS LOCAL 7 (BOSTON AREA)</i>	03/16/2014	\$41.19	\$7.70	\$19.25	\$0.00	\$68.14
---	------------	---------	--------	---------	--------	---------

Classification
Effective Date
Base Wage
Health
Pension
**Supplemental
Unemployment**
Total Rate
Apprentice - IRONWORKER - Local 7 Boston
Effective Date - 03/16/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$24.71	\$7.70	\$19.25	\$0.00	\$51.66
2	70	\$28.83	\$7.70	\$19.25	\$0.00	\$55.78
3	75	\$30.89	\$7.70	\$19.25	\$0.00	\$57.84
4	80	\$32.95	\$7.70	\$19.25	\$0.00	\$59.90
5	85	\$35.01	\$7.70	\$19.25	\$0.00	\$61.96
6	90	\$37.07	\$7.70	\$19.25	\$0.00	\$64.02

Notes:

** Structural 1:6; Ornamental 1:4

Apprentice to Journeyworker Ratio:**
JACKHAMMER & PAVING BREAKER OPERATOR
LABORERS - ZONE 1

12/01/2014	\$34.85	\$7.30	\$12.95	\$0.00	\$55.10
06/01/2015	\$35.60	\$7.30	\$12.95	\$0.00	\$55.85
12/01/2015	\$36.35	\$7.30	\$12.95	\$0.00	\$56.60
06/01/2016	\$37.10	\$7.30	\$12.95	\$0.00	\$57.35
12/01/2016	\$38.10	\$7.30	\$12.95	\$0.00	\$58.35

For apprentice rates see "Apprentice- LABORER"

LABORER
LABORERS - ZONE 1

12/01/2014	\$34.60	\$7.30	\$12.95	\$0.00	\$54.85
06/01/2015	\$35.35	\$7.30	\$12.95	\$0.00	\$55.60
12/01/2015	\$36.10	\$7.30	\$12.95	\$0.00	\$56.35
06/01/2016	\$36.85	\$7.30	\$12.95	\$0.00	\$57.10
12/01/2016	\$37.85	\$7.30	\$12.95	\$0.00	\$58.10

Apprentice - LABORER - Zone 1
Effective Date - 12/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$20.76	\$7.30	\$12.95	\$0.00	\$41.01
2	70	\$24.22	\$7.30	\$12.95	\$0.00	\$44.47
3	80	\$27.68	\$7.30	\$12.95	\$0.00	\$47.93
4	90	\$31.14	\$7.30	\$12.95	\$0.00	\$51.39

Effective Date - 06/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$21.21	\$7.30	\$12.95	\$0.00	\$41.46
2	70	\$24.75	\$7.30	\$12.95	\$0.00	\$45.00
3	80	\$28.28	\$7.30	\$12.95	\$0.00	\$48.53
4	90	\$31.82	\$7.30	\$12.95	\$0.00	\$52.07

Notes:
Apprentice to Journeyworker Ratio:1:5

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
LABORER: CARPENTER TENDER <i>LABORERS - ZONE I</i>	12/01/2014	\$34.60	\$7.30	\$12.95	\$0.00	\$54.85
	06/01/2015	\$35.35	\$7.30	\$12.95	\$0.00	\$55.60
	12/01/2015	\$36.10	\$7.30	\$12.95	\$0.00	\$56.35
	06/01/2016	\$36.85	\$7.30	\$12.95	\$0.00	\$57.10
	12/01/2016	\$37.85	\$7.30	\$12.95	\$0.00	\$58.10
For apprentice rates see "Apprentice- LABORER"						
LABORER: CEMENT FINISHER TENDER <i>LABORERS - ZONE I</i>	12/01/2014	\$34.60	\$7.30	\$12.95	\$0.00	\$54.85
	06/01/2015	\$35.35	\$7.30	\$12.95	\$0.00	\$55.60
	12/01/2015	\$36.10	\$7.30	\$12.95	\$0.00	\$56.35
	06/01/2016	\$36.85	\$7.30	\$12.95	\$0.00	\$57.10
	12/01/2016	\$37.85	\$7.30	\$12.95	\$0.00	\$58.10
For apprentice rates see "Apprentice- LABORER"						
LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER <i>LABORERS - ZONE I</i>	12/01/2014	\$34.75	\$7.30	\$12.95	\$0.00	\$55.00
	06/01/2015	\$35.50	\$7.30	\$12.95	\$0.00	\$55.75
	12/01/2015	\$36.25	\$7.30	\$12.95	\$0.00	\$56.50
For apprentice rates see "Apprentice- LABORER"						
LABORER: MASON TENDER <i>LABORERS - ZONE I</i>	12/01/2014	\$34.85	\$7.30	\$12.95	\$0.00	\$55.10
	06/01/2015	\$35.60	\$7.30	\$12.95	\$0.00	\$55.85
	12/01/2015	\$36.35	\$7.30	\$12.95	\$0.00	\$56.60
	06/01/2016	\$37.10	\$7.30	\$12.95	\$0.00	\$57.35
	12/01/2016	\$38.10	\$7.30	\$12.95	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
LABORER: MULTI-TRADE TENDER <i>LABORERS - ZONE I</i>	12/01/2014	\$34.60	\$7.30	\$12.95	\$0.00	\$54.85
	06/01/2015	\$35.35	\$7.30	\$12.95	\$0.00	\$55.60
	12/01/2015	\$36.10	\$7.30	\$12.95	\$0.00	\$56.35
	06/01/2016	\$36.85	\$7.30	\$12.95	\$0.00	\$57.10
	12/01/2016	\$37.85	\$7.30	\$12.95	\$0.00	\$58.10
For apprentice rates see "Apprentice- LABORER"						
LABORER: TREE REMOVER <i>LABORERS - ZONE I</i>	12/01/2014	\$34.60	\$7.30	\$12.95	\$0.00	\$54.85
	06/01/2015	\$35.35	\$7.30	\$12.95	\$0.00	\$55.60
	12/01/2015	\$36.10	\$7.30	\$12.95	\$0.00	\$56.35
	06/01/2016	\$36.85	\$7.30	\$12.95	\$0.00	\$57.10
	12/01/2016	\$37.85	\$7.30	\$12.95	\$0.00	\$58.10
This classification applies to all tree work associated with the removal of standing trees, and trimming and removal of branches and limbs when the work is not done for a utility company for the purpose of operation, maintenance or repair of utility company equipment. For apprentice rates see "Apprentice- LABORER"						
LASER BEAM OPERATOR <i>LABORERS - ZONE I</i>	12/01/2014	\$34.85	\$7.30	\$12.95	\$0.00	\$55.10
	06/01/2015	\$35.60	\$7.30	\$12.95	\$0.00	\$55.85
	12/01/2015	\$36.35	\$7.30	\$12.95	\$0.00	\$56.60
	06/01/2016	\$37.10	\$7.30	\$12.95	\$0.00	\$57.35
	12/01/2016	\$38.10	\$7.30	\$12.95	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
MARBLE & TILE FINISHERS <i>BRICKLAYERS LOCAL 3 - MARBLE & TILE</i>	08/01/2014	\$37.37	\$10.18	\$16.90	\$0.00	\$64.45
	02/01/2015	\$37.37	\$10.18	\$17.18	\$0.00	\$64.73
	08/01/2015	\$38.08	\$10.18	\$17.25	\$0.00	\$65.51
	02/01/2016	\$38.53	\$10.18	\$17.25	\$0.00	\$65.96
	08/01/2016	\$39.23	\$10.18	\$17.33	\$0.00	\$66.74
	02/01/2017	\$39.69	\$10.18	\$17.33	\$0.00	\$67.20

Classification

**Effective Date Base Wage Health Pension Supplemental
Unemployment Total Rate**

Apprentice - MARBLE & TILE FINISHER - Local 3 Marble & Tile

Effective Date - 08/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$18.69	\$10.18	\$16.90	\$0.00	\$45.77
2	60	\$22.42	\$10.18	\$16.90	\$0.00	\$49.50
3	70	\$26.16	\$10.18	\$16.90	\$0.00	\$53.24
4	80	\$29.90	\$10.18	\$16.90	\$0.00	\$56.98
5	90	\$33.63	\$10.18	\$16.90	\$0.00	\$60.71

Effective Date - 02/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$18.69	\$10.18	\$17.18	\$0.00	\$46.05
2	60	\$22.42	\$10.18	\$17.18	\$0.00	\$49.78
3	70	\$26.16	\$10.18	\$17.18	\$0.00	\$53.52
4	80	\$29.90	\$10.18	\$17.18	\$0.00	\$57.26
5	90	\$33.63	\$10.18	\$17.18	\$0.00	\$60.99

Notes:

Apprentice to Journeyworker Ratio:1:3

MARBLE MASONS,TILELAYERS & TERRAZZO MECH	08/01/2014	\$49.00	\$10.18	\$18.22	\$0.00	\$77.40
BRICKLAYERS LOCAL 3 - MARBLE & TILE	02/01/2015	\$49.00	\$10.18	\$18.50	\$0.00	\$77.68
	08/01/2015	\$49.90	\$10.18	\$18.57	\$0.00	\$78.65
	02/01/2016	\$50.47	\$10.18	\$18.57	\$0.00	\$79.22
	08/01/2016	\$51.37	\$10.18	\$18.65	\$0.00	\$80.20
	02/01/2017	\$51.94	\$10.18	\$18.65	\$0.00	\$80.77

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
----------------	----------------	-----------	--------	---------	---------------------------	------------

Apprentice - MARBLE-TILE-TERRAZZO MECHANIC - Local 3 Marble & Tile

Effective Date - 08/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.50	\$10.18	\$18.22	\$0.00	\$52.90
2	60	\$29.40	\$10.18	\$18.22	\$0.00	\$57.80
3	70	\$34.30	\$10.18	\$18.22	\$0.00	\$62.70
4	80	\$39.20	\$10.18	\$18.22	\$0.00	\$67.60
5	90	\$44.10	\$10.18	\$18.22	\$0.00	\$72.50

Effective Date - 02/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.50	\$10.18	\$18.50	\$0.00	\$53.18
2	60	\$29.40	\$10.18	\$18.50	\$0.00	\$58.08
3	70	\$34.30	\$10.18	\$18.50	\$0.00	\$62.98
4	80	\$39.20	\$10.18	\$18.50	\$0.00	\$67.88
5	90	\$44.10	\$10.18	\$18.50	\$0.00	\$72.78

Notes:

Apprentice to Journeyworker Ratio:1:5

MECH. SWEEPER OPERATOR (ON CONST. SITES)	12/01/2014	\$41.99	\$10.00	\$14.30	\$0.00	\$66.29
OPERATING ENGINEERS LOCAL 4	06/01/2015	\$42.73	\$10.00	\$14.30	\$0.00	\$67.03
	12/01/2015	\$43.97	\$10.00	\$14.30	\$0.00	\$68.27
	06/01/2016	\$44.72	\$10.00	\$14.30	\$0.00	\$69.02
	12/01/2016	\$45.95	\$10.00	\$14.30	\$0.00	\$70.25
	06/01/2017	\$46.94	\$10.00	\$14.30	\$0.00	\$71.24
	12/01/2017	\$47.93	\$10.00	\$14.30	\$0.00	\$72.23

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

MECHANICS MAINTENANCE	12/01/2014	\$41.99	\$10.00	\$14.30	\$0.00	\$66.29
OPERATING ENGINEERS LOCAL 4	06/01/2015	\$42.73	\$10.00	\$14.30	\$0.00	\$67.03
	12/01/2015	\$43.97	\$10.00	\$14.30	\$0.00	\$68.27
	06/01/2016	\$44.72	\$10.00	\$14.30	\$0.00	\$69.02
	12/01/2016	\$45.95	\$10.00	\$14.30	\$0.00	\$70.25
	06/01/2017	\$46.94	\$10.00	\$14.30	\$0.00	\$71.24
	12/01/2017	\$47.93	\$10.00	\$14.30	\$0.00	\$72.23

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

MILLWRIGHT (Zone 1)	10/01/2014	\$36.68	\$9.80	\$16.21	\$0.00	\$62.69
MILLWRIGHTS LOCAL 1121 - Zone 1	04/01/2015	\$37.64	\$9.80	\$16.21	\$0.00	\$63.65

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
----------------	----------------	-----------	--------	---------	---------------------------	------------

Apprentice - MILLWRIGHT - Local 1121 Zone 1

Effective Date - 10/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$20.17	\$9.80	\$4.48	\$0.00	\$34.45
2	65	\$23.84	\$9.80	\$13.36	\$0.00	\$47.00
3	75	\$27.51	\$9.80	\$14.18	\$0.00	\$51.49
4	85	\$31.18	\$9.80	\$14.99	\$0.00	\$55.97

Effective Date - 04/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$20.70	\$9.80	\$4.48	\$0.00	\$34.98
2	65	\$24.47	\$9.80	\$13.36	\$0.00	\$47.63
3	75	\$28.23	\$9.80	\$14.18	\$0.00	\$52.21
4	85	\$31.99	\$9.80	\$14.99	\$0.00	\$56.78

Notes:

Steps are 2,000 hours

Apprentice to Journeyworker Ratio:1:5

MORTAR MIXER	12/01/2014	\$34.85	\$7.30	\$12.95	\$0.00	\$55.10
LABORERS - ZONE 1	06/01/2015	\$35.60	\$7.30	\$12.95	\$0.00	\$55.85
	12/01/2015	\$36.35	\$7.30	\$12.95	\$0.00	\$56.60
	06/01/2016	\$37.10	\$7.30	\$12.95	\$0.00	\$57.35
	12/01/2016	\$38.10	\$7.30	\$12.95	\$0.00	\$58.35

For apprentice rates see "Apprentice- LABORER"

OILER (OTHER THAN TRUCK CRANES,GRADALLS)	12/01/2014	\$21.90	\$10.00	\$14.30	\$0.00	\$46.20
OPERATING ENGINEERS LOCAL 4	06/01/2015	\$22.28	\$10.00	\$14.30	\$0.00	\$46.58
	12/01/2015	\$22.93	\$10.00	\$14.30	\$0.00	\$47.23
	06/01/2016	\$23.32	\$10.00	\$14.30	\$0.00	\$47.62
	12/01/2016	\$23.97	\$10.00	\$14.30	\$0.00	\$48.27
	06/01/2017	\$24.48	\$10.00	\$14.30	\$0.00	\$48.78
	12/01/2017	\$25.00	\$10.00	\$14.30	\$0.00	\$49.30

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

OILER (TRUCK CRANES, GRADALLS)	12/01/2014	\$25.54	\$10.00	\$14.30	\$0.00	\$49.84
OPERATING ENGINEERS LOCAL 4	06/01/2015	\$25.99	\$10.00	\$14.30	\$0.00	\$50.29
	12/01/2015	\$26.74	\$10.00	\$14.30	\$0.00	\$51.04
	06/01/2016	\$27.20	\$10.00	\$14.30	\$0.00	\$51.50
	12/01/2016	\$27.95	\$10.00	\$14.30	\$0.00	\$52.25
	06/01/2017	\$28.55	\$10.00	\$14.30	\$0.00	\$52.85
	12/01/2017	\$29.16	\$10.00	\$14.30	\$0.00	\$53.46

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
OTHER POWER DRIVEN EQUIPMENT - CLASS II <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2014	\$41.99	\$10.00	\$14.30	\$0.00	\$66.29
	06/01/2015	\$42.73	\$10.00	\$14.30	\$0.00	\$67.03
	12/01/2015	\$43.97	\$10.00	\$14.30	\$0.00	\$68.27
	06/01/2016	\$44.72	\$10.00	\$14.30	\$0.00	\$69.02
	12/01/2016	\$45.95	\$10.00	\$14.30	\$0.00	\$70.25
	06/01/2017	\$46.94	\$10.00	\$14.30	\$0.00	\$71.24
	12/01/2017	\$47.93	\$10.00	\$14.30	\$0.00	\$72.23

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

PAINTER (BRIDGES/TANKS) <i>PAINTERS LOCAL 35 - ZONE 2</i>	01/01/2015	\$47.66	\$7.85	\$16.10	\$0.00	\$71.61
	07/01/2015	\$48.56	\$7.85	\$16.10	\$0.00	\$72.51
	01/01/2016	\$49.51	\$7.85	\$16.10	\$0.00	\$73.46
	07/01/2016	\$50.46	\$7.85	\$16.10	\$0.00	\$74.41
	01/01/2017	\$51.41	\$7.85	\$16.10	\$0.00	\$75.36

Apprentice - PAINTER Local 35 - BRIDGES/TANKS

Effective Date - 01/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.83	\$7.85	\$0.00	\$0.00	\$31.68
2	55	\$26.21	\$7.85	\$3.66	\$0.00	\$37.72
3	60	\$28.60	\$7.85	\$3.99	\$0.00	\$40.44
4	65	\$30.98	\$7.85	\$4.32	\$0.00	\$43.15
5	70	\$33.36	\$7.85	\$14.11	\$0.00	\$55.32
6	75	\$35.75	\$7.85	\$14.44	\$0.00	\$58.04
7	80	\$38.13	\$7.85	\$14.77	\$0.00	\$60.75
8	90	\$42.89	\$7.85	\$15.44	\$0.00	\$66.18

Effective Date - 07/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.28	\$7.85	\$0.00	\$0.00	\$32.13
2	55	\$26.71	\$7.85	\$3.66	\$0.00	\$38.22
3	60	\$29.14	\$7.85	\$3.99	\$0.00	\$40.98
4	65	\$31.56	\$7.85	\$4.32	\$0.00	\$43.73
5	70	\$33.99	\$7.85	\$14.11	\$0.00	\$55.95
6	75	\$36.42	\$7.85	\$14.44	\$0.00	\$58.71
7	80	\$38.85	\$7.85	\$14.77	\$0.00	\$61.47
8	90	\$43.70	\$7.85	\$15.44	\$0.00	\$66.99

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (SPRAY OR SANDBLAST, NEW) * * If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. <i>PAINTERS LOCAL 35 - ZONE 2</i>	01/01/2015	\$38.56	\$7.85	\$16.10	\$0.00	\$62.51
	07/01/2015	\$39.46	\$7.85	\$16.10	\$0.00	\$63.41
	01/01/2016	\$40.41	\$7.85	\$16.10	\$0.00	\$64.36
	07/01/2016	\$41.36	\$7.85	\$16.10	\$0.00	\$65.31
	01/01/2017	\$42.31	\$7.85	\$16.10	\$0.00	\$66.26

Apprentice - PAINTER Local 35 Zone 2 - Spray/Sandblast - New**Effective Date -** 01/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.28	\$7.85	\$0.00	\$0.00	\$27.13
2	55	\$21.21	\$7.85	\$3.66	\$0.00	\$32.72
3	60	\$23.14	\$7.85	\$3.99	\$0.00	\$34.98
4	65	\$25.06	\$7.85	\$4.32	\$0.00	\$37.23
5	70	\$26.99	\$7.85	\$14.11	\$0.00	\$48.95
6	75	\$28.92	\$7.85	\$14.44	\$0.00	\$51.21
7	80	\$30.85	\$7.85	\$14.77	\$0.00	\$53.47
8	90	\$34.70	\$7.85	\$15.44	\$0.00	\$57.99

Effective Date - 07/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.73	\$7.85	\$0.00	\$0.00	\$27.58
2	55	\$21.70	\$7.85	\$3.66	\$0.00	\$33.21
3	60	\$23.68	\$7.85	\$3.99	\$0.00	\$35.52
4	65	\$25.65	\$7.85	\$4.32	\$0.00	\$37.82
5	70	\$27.62	\$7.85	\$14.11	\$0.00	\$49.58
6	75	\$29.60	\$7.85	\$14.44	\$0.00	\$51.89
7	80	\$31.57	\$7.85	\$14.77	\$0.00	\$54.19
8	90	\$35.51	\$7.85	\$15.44	\$0.00	\$58.80

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (SPRAY OR SANDBLAST, REPAINT)

PAINTERS LOCAL 35 - ZONE 2

01/01/2015	\$36.62	\$7.85	\$16.10	\$0.00	\$60.57
07/01/2015	\$37.52	\$7.85	\$16.10	\$0.00	\$61.47
01/01/2016	\$38.47	\$7.85	\$16.10	\$0.00	\$62.42
07/01/2016	\$39.42	\$7.85	\$16.10	\$0.00	\$63.37
01/01/2017	\$40.37	\$7.85	\$16.10	\$0.00	\$64.32

Apprentice - PAINTER Local 35 Zone 2 - Spray/Sandblast - Repaint**Effective Date - 01/01/2015**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$18.31	\$7.85	\$0.00	\$0.00	\$26.16
2	55	\$20.14	\$7.85	\$3.66	\$0.00	\$31.65
3	60	\$21.97	\$7.85	\$3.99	\$0.00	\$33.81
4	65	\$23.80	\$7.85	\$4.32	\$0.00	\$35.97
5	70	\$25.63	\$7.85	\$14.11	\$0.00	\$47.59
6	75	\$27.47	\$7.85	\$14.44	\$0.00	\$49.76
7	80	\$29.30	\$7.85	\$14.77	\$0.00	\$51.92
8	90	\$32.96	\$7.85	\$15.44	\$0.00	\$56.25

Effective Date - 07/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$18.76	\$7.85	\$0.00	\$0.00	\$26.61
2	55	\$20.64	\$7.85	\$3.66	\$0.00	\$32.15
3	60	\$22.51	\$7.85	\$3.99	\$0.00	\$34.35
4	65	\$24.39	\$7.85	\$4.32	\$0.00	\$36.56
5	70	\$26.26	\$7.85	\$14.11	\$0.00	\$48.22
6	75	\$28.14	\$7.85	\$14.44	\$0.00	\$50.43
7	80	\$30.02	\$7.85	\$14.77	\$0.00	\$52.64
8	90	\$33.77	\$7.85	\$15.44	\$0.00	\$57.06

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (TRAFFIC MARKINGS)

LABORERS - ZONE 1

12/01/2014	\$34.60	\$7.30	\$12.95	\$0.00	\$54.85
06/01/2015	\$35.35	\$7.30	\$12.95	\$0.00	\$55.60
12/01/2015	\$36.10	\$7.30	\$12.95	\$0.00	\$56.35
06/01/2016	\$36.85	\$7.30	\$12.95	\$0.00	\$57.10
12/01/2016	\$37.85	\$7.30	\$12.95	\$0.00	\$58.10

For Apprentice rates see "Apprentice- LABORER"

PAINTER / TAPER (BRUSH, NEW) *

* If 30% or more of surfaces to be painted are new construction,

NEW paint rate shall be used. PAINTERS LOCAL 35 - ZONE 2

01/01/2015	\$37.16	\$7.85	\$16.10	\$0.00	\$61.11
07/01/2015	\$38.06	\$7.85	\$16.10	\$0.00	\$62.01
01/01/2016	\$39.01	\$7.85	\$16.10	\$0.00	\$62.96
07/01/2016	\$39.96	\$7.85	\$16.10	\$0.00	\$63.91
01/01/2017	\$40.91	\$7.85	\$16.10	\$0.00	\$64.86

Apprentice - PAINTER - Local 35 Zone 2 - BRUSH NEW**Effective Date - 01/01/2015**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$18.58	\$7.85	\$0.00	\$0.00	\$26.43
2	55	\$20.44	\$7.85	\$3.66	\$0.00	\$31.95
3	60	\$22.30	\$7.85	\$3.99	\$0.00	\$34.14
4	65	\$24.15	\$7.85	\$4.32	\$0.00	\$36.32
5	70	\$26.01	\$7.85	\$14.11	\$0.00	\$47.97
6	75	\$27.87	\$7.85	\$14.44	\$0.00	\$50.16
7	80	\$29.73	\$7.85	\$14.77	\$0.00	\$52.35
8	90	\$33.44	\$7.85	\$15.44	\$0.00	\$56.73

Effective Date - 07/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.03	\$7.85	\$0.00	\$0.00	\$26.88
2	55	\$20.93	\$7.85	\$3.66	\$0.00	\$32.44
3	60	\$22.84	\$7.85	\$3.99	\$0.00	\$34.68
4	65	\$24.74	\$7.85	\$4.32	\$0.00	\$36.91
5	70	\$26.64	\$7.85	\$14.11	\$0.00	\$48.60
6	75	\$28.55	\$7.85	\$14.44	\$0.00	\$50.84
7	80	\$30.45	\$7.85	\$14.77	\$0.00	\$53.07
8	90	\$34.25	\$7.85	\$15.44	\$0.00	\$57.54

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER / TAPER (BRUSH, REPAINT)

PAINTERS LOCAL 35 - ZONE 2

01/01/2015	\$35.22	\$7.85	\$16.10	\$0.00	\$59.17
07/01/2015	\$36.12	\$7.85	\$16.10	\$0.00	\$60.07
01/01/2016	\$37.07	\$7.85	\$16.10	\$0.00	\$61.02
07/01/2016	\$38.02	\$7.85	\$16.10	\$0.00	\$61.97
01/01/2017	\$38.97	\$7.85	\$16.10	\$0.00	\$62.92

Classification
Effective Date
Base Wage
Health
Pension
**Supplemental
Unemployment**
Total Rate
Apprentice - PAINTER Local 35 Zone 2 - BRUSH REPAINT
Effective Date - 01/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$17.61	\$7.85	\$0.00	\$0.00	\$25.46
2	55	\$19.37	\$7.85	\$3.66	\$0.00	\$30.88
3	60	\$21.13	\$7.85	\$3.99	\$0.00	\$32.97
4	65	\$22.89	\$7.85	\$4.32	\$0.00	\$35.06
5	70	\$24.65	\$7.85	\$14.11	\$0.00	\$46.61
6	75	\$26.42	\$7.85	\$14.44	\$0.00	\$48.71
7	80	\$28.18	\$7.85	\$14.77	\$0.00	\$50.80
8	90	\$31.70	\$7.85	\$15.44	\$0.00	\$54.99

Effective Date - 07/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$18.06	\$7.85	\$0.00	\$0.00	\$25.91
2	55	\$19.87	\$7.85	\$3.66	\$0.00	\$31.38
3	60	\$21.67	\$7.85	\$3.99	\$0.00	\$33.51
4	65	\$23.48	\$7.85	\$4.32	\$0.00	\$35.65
5	70	\$25.28	\$7.85	\$14.11	\$0.00	\$47.24
6	75	\$27.09	\$7.85	\$14.44	\$0.00	\$49.38
7	80	\$28.90	\$7.85	\$14.77	\$0.00	\$51.52
8	90	\$32.51	\$7.85	\$15.44	\$0.00	\$55.80

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1
PANEL & PICKUP TRUCKS DRIVER
TEAMSTERS JOINT COUNCIL NO. 10 ZONE A

12/01/2014	\$32.23	\$9.91	\$9.33	\$0.00	\$51.47
06/01/2015	\$32.58	\$9.91	\$9.33	\$0.00	\$51.82
08/01/2015	\$32.58	\$10.41	\$9.33	\$0.00	\$52.32
12/01/2015	\$32.58	\$10.41	\$10.08	\$0.00	\$53.07
06/01/2016	\$33.08	\$10.41	\$10.08	\$0.00	\$53.57
08/01/2016	\$33.08	\$10.91	\$10.08	\$0.00	\$54.07
12/01/2016	\$33.08	\$10.91	\$10.89	\$0.00	\$54.88

PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK)
PILE DRIVER LOCAL 56 (ZONE 1)

08/01/2014	\$41.60	\$9.80	\$18.17	\$0.00	\$69.57
08/01/2015	\$43.10	\$9.80	\$18.17	\$0.00	\$71.07

PILE DRIVER
PILE DRIVER LOCAL 56 (ZONE 1)

08/01/2014	\$41.60	\$9.80	\$18.17	\$0.00	\$69.57
08/01/2015	\$43.10	\$9.80	\$18.17	\$0.00	\$71.07

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PILE DRIVER - Local 56 Zone 1

Effective Date - 08/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.80	\$9.80	\$18.17	\$0.00	\$48.77
2	60	\$24.96	\$9.80	\$18.17	\$0.00	\$52.93
3	70	\$29.12	\$9.80	\$18.17	\$0.00	\$57.09
4	75	\$31.20	\$9.80	\$18.17	\$0.00	\$59.17
5	80	\$33.28	\$9.80	\$18.17	\$0.00	\$61.25
6	80	\$33.28	\$9.80	\$18.17	\$0.00	\$61.25
7	90	\$37.44	\$9.80	\$18.17	\$0.00	\$65.41
8	90	\$37.44	\$9.80	\$18.17	\$0.00	\$65.41

Effective Date - 08/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.55	\$9.80	\$18.17	\$0.00	\$49.52
2	60	\$25.86	\$9.80	\$18.17	\$0.00	\$53.83
3	70	\$30.17	\$9.80	\$18.17	\$0.00	\$58.14
4	75	\$32.33	\$9.80	\$18.17	\$0.00	\$60.30
5	80	\$34.48	\$9.80	\$18.17	\$0.00	\$62.45
6	80	\$34.48	\$9.80	\$18.17	\$0.00	\$62.45
7	90	\$38.79	\$9.80	\$18.17	\$0.00	\$66.76
8	90	\$38.79	\$9.80	\$18.17	\$0.00	\$66.76

Notes:

Apprentice to Journeyworker Ratio:1:3

PIPEFITTER & STEAMFITTER

PIPEFITTERS LOCAL 537

09/01/2014	\$48.69	\$9.20	\$16.64	\$0.00	\$74.53
03/01/2015	\$49.69	\$9.20	\$16.64	\$0.00	\$75.53
09/01/2015	\$50.69	\$9.20	\$16.64	\$0.00	\$76.53
03/01/2016	\$51.69	\$9.20	\$16.64	\$0.00	\$77.53
09/01/2016	\$52.69	\$9.20	\$16.64	\$0.00	\$78.53
03/01/2017	\$53.69	\$9.20	\$16.64	\$0.00	\$79.53

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PIPEFITTER - Local 537
Effective Date - 09/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$19.48	\$9.20	\$7.50	\$0.00	\$36.18
2	45	\$21.91	\$9.20	\$16.64	\$0.00	\$47.75
3	60	\$29.21	\$9.20	\$16.64	\$0.00	\$55.05
4	70	\$34.08	\$9.20	\$16.64	\$0.00	\$59.92
5	80	\$38.95	\$9.20	\$16.64	\$0.00	\$64.79

Effective Date - 03/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$19.88	\$9.20	\$7.50	\$0.00	\$36.58
2	45	\$22.36	\$9.20	\$16.64	\$0.00	\$48.20
3	60	\$29.81	\$9.20	\$16.64	\$0.00	\$55.65
4	70	\$34.78	\$9.20	\$16.64	\$0.00	\$60.62
5	80	\$39.75	\$9.20	\$16.64	\$0.00	\$65.59

Notes:

** 1:3; 3:15; 1:10 thereafter / Steps are 1 yr.

Refrig/AC Mechanic **1:1;1:2;2:4;3:6;4:8;5:10;6:12;7:14;8:17;9:20;10:23(Max)

Apprentice to Journeyworker Ratio:**

PIPELAYER	12/01/2014	\$34.85	\$7.30	\$12.95	\$0.00	\$55.10
LABORERS - ZONE 1	06/01/2015	\$35.60	\$7.30	\$12.95	\$0.00	\$55.85
	12/01/2015	\$36.35	\$7.30	\$12.95	\$0.00	\$56.60
	06/01/2016	\$37.10	\$7.30	\$12.95	\$0.00	\$57.35
	12/01/2016	\$38.10	\$7.30	\$12.95	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
PLUMBERS & GASFITTERS	09/01/2014	\$49.66	\$10.32	\$14.54	\$0.00	\$74.52
PLUMBERS & GASFITTERS LOCAL 12	03/01/2015	\$50.66	\$10.32	\$14.54	\$0.00	\$75.52
	09/01/2015	\$51.66	\$10.32	\$14.54	\$0.00	\$76.52
	03/01/2016	\$52.81	\$10.32	\$14.54	\$0.00	\$77.67
	09/01/2016	\$53.86	\$10.32	\$14.54	\$0.00	\$78.72
	03/01/2017	\$54.86	\$10.32	\$14.54	\$0.00	\$79.72

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
----------------	----------------	-----------	--------	---------	------------------------------	------------

Apprentice - PLUMBER/GASFITTER - Local 12

Effective Date - 09/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$17.38	\$10.32	\$5.42	\$0.00	\$33.12
2	40	\$19.86	\$10.32	\$6.13	\$0.00	\$36.31
3	55	\$27.31	\$10.32	\$8.23	\$0.00	\$45.86
4	65	\$32.28	\$10.32	\$9.64	\$0.00	\$52.24
5	75	\$37.25	\$10.32	\$11.04	\$0.00	\$58.61

Effective Date - 03/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$17.73	\$10.32	\$5.42	\$0.00	\$33.47
2	40	\$20.26	\$10.32	\$6.11	\$0.00	\$36.69
3	55	\$27.86	\$10.32	\$8.22	\$0.00	\$46.40
4	65	\$32.93	\$10.32	\$9.62	\$0.00	\$52.87
5	75	\$38.00	\$10.32	\$11.03	\$0.00	\$59.35

Notes:

** 1:2; 2:6; 3:10; 4:14; 5:19/Steps are 1 yr
Step4 with lic\$55.42 Step5 with lic\$61.79

Apprentice to Journeyworker Ratio:**

PNEUMATIC CONTROLS (TEMP.)	09/01/2014	\$48.69	\$9.20	\$16.64	\$0.00	\$74.53
PIPEFITTERS LOCAL 537	03/01/2015	\$49.69	\$9.20	\$16.64	\$0.00	\$75.53
	09/01/2015	\$50.69	\$9.20	\$16.64	\$0.00	\$76.53
	03/01/2016	\$51.69	\$9.20	\$16.64	\$0.00	\$77.53
	09/01/2016	\$52.69	\$9.20	\$16.64	\$0.00	\$78.53
	03/01/2017	\$53.69	\$9.20	\$16.64	\$0.00	\$79.53
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
PNEUMATIC DRILL/TOOL OPERATOR	12/01/2014	\$34.85	\$7.30	\$12.95	\$0.00	\$55.10
LABORERS - ZONE 1	06/01/2015	\$35.60	\$7.30	\$12.95	\$0.00	\$55.85
	12/01/2015	\$36.35	\$7.30	\$12.95	\$0.00	\$56.60
	06/01/2016	\$37.10	\$7.30	\$12.95	\$0.00	\$57.35
	12/01/2016	\$38.10	\$7.30	\$12.95	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
POWDERMAN & BLASTER	12/01/2014	\$35.60	\$7.30	\$12.95	\$0.00	\$55.85
LABORERS - ZONE 1	06/01/2015	\$36.35	\$7.30	\$12.95	\$0.00	\$56.60
	12/01/2015	\$37.10	\$7.30	\$12.95	\$0.00	\$57.35
	06/01/2016	\$37.85	\$7.30	\$12.95	\$0.00	\$58.10
	12/01/2016	\$38.85	\$7.30	\$12.95	\$0.00	\$59.10
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
POWER SHOVEL/DERRICK/TRENCHING MACHINE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2014	\$42.39	\$10.00	\$14.30	\$0.00	\$66.69
	06/01/2015	\$43.14	\$10.00	\$14.30	\$0.00	\$67.44
	12/01/2015	\$44.39	\$10.00	\$14.30	\$0.00	\$68.69
	06/01/2016	\$45.14	\$10.00	\$14.30	\$0.00	\$69.44
	12/01/2016	\$46.39	\$10.00	\$14.30	\$0.00	\$70.69
	06/01/2017	\$47.39	\$10.00	\$14.30	\$0.00	\$71.69
	12/01/2017	\$48.39	\$10.00	\$14.30	\$0.00	\$72.69
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (CONCRETE) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2014	\$42.39	\$10.00	\$14.30	\$0.00	\$66.69
	06/01/2015	\$43.14	\$10.00	\$14.30	\$0.00	\$67.44
	12/01/2015	\$44.39	\$10.00	\$14.30	\$0.00	\$68.69
	06/01/2016	\$45.14	\$10.00	\$14.30	\$0.00	\$69.44
	12/01/2016	\$46.39	\$10.00	\$14.30	\$0.00	\$70.69
	06/01/2017	\$47.39	\$10.00	\$14.30	\$0.00	\$71.69
	12/01/2017	\$48.39	\$10.00	\$14.30	\$0.00	\$72.69
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (DEWATERING, OTHER) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2014	\$29.40	\$10.00	\$14.30	\$0.00	\$53.70
	06/01/2015	\$29.92	\$10.00	\$14.30	\$0.00	\$54.22
	12/01/2015	\$30.79	\$10.00	\$14.30	\$0.00	\$55.09
	06/01/2016	\$31.31	\$10.00	\$14.30	\$0.00	\$55.61
	12/01/2016	\$32.18	\$10.00	\$14.30	\$0.00	\$56.48
	06/01/2017	\$32.87	\$10.00	\$14.30	\$0.00	\$57.17
	12/01/2017	\$33.56	\$10.00	\$14.30	\$0.00	\$57.86
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
READY MIX CONCRETE DRIVERS after 4/30/10 (Drivers Hired After 4/30/2010) <i>TEAMSTERS LOCAL 25c</i>	07/01/2014	\$27.73	\$7.73	\$8.65	\$0.00	\$44.11
	05/01/2015	\$27.88	\$7.73	\$8.92	\$0.00	\$44.53
	07/01/2015	\$27.88	\$7.98	\$8.92	\$0.00	\$44.78
	05/01/2016	\$28.03	\$7.98	\$9.31	\$0.00	\$45.32
	07/01/2016	\$28.03	\$8.23	\$9.31	\$0.00	\$45.57
	05/01/2017	\$28.18	\$8.23	\$9.72	\$0.00	\$46.13
	07/01/2017	\$28.18	\$8.48	\$9.72	\$0.00	\$46.38
READY-MIX CONCRETE DRIVER <i>TEAMSTERS LOCAL 25c</i>	07/01/2014	\$29.03	\$7.73	\$8.65	\$0.00	\$45.41
	05/01/2015	\$29.18	\$7.73	\$8.92	\$0.00	\$45.83
	07/01/2015	\$29.18	\$7.98	\$8.92	\$0.00	\$46.08
	05/01/2016	\$29.33	\$7.98	\$9.31	\$0.00	\$46.62
	07/01/2016	\$29.33	\$8.23	\$9.31	\$0.00	\$46.87
	05/01/2017	\$29.48	\$8.23	\$9.72	\$0.00	\$47.43
	07/01/2017	\$29.48	\$8.48	\$9.72	\$0.00	\$47.68
RECLAIMERS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2014	\$41.99	\$10.00	\$14.30	\$0.00	\$66.29
	06/01/2015	\$42.73	\$10.00	\$14.30	\$0.00	\$67.03
	12/01/2015	\$43.97	\$10.00	\$14.30	\$0.00	\$68.27
	06/01/2016	\$44.72	\$10.00	\$14.30	\$0.00	\$69.02
	12/01/2016	\$45.95	\$10.00	\$14.30	\$0.00	\$70.25
	06/01/2017	\$46.94	\$10.00	\$14.30	\$0.00	\$71.24
	12/01/2017	\$47.93	\$10.00	\$14.30	\$0.00	\$72.23
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
RESIDENTIAL WOOD FRAME (All Other Work) <i>CARPENTERS -ZONE 2 (Residential Wood)</i>	04/01/2011	\$24.24	\$8.67	\$15.51	\$0.00	\$48.42
RESIDENTIAL WOOD FRAME CARPENTER ** ** The Residential Wood Frame Carpenter classification applies only to the construction of new, wood frame residences that do not exceed four stories including the basement. <i>CARPENTERS -ZONE 2 (Residential Wood)</i>	05/01/2011	\$24.24	\$6.34	\$6.23	\$0.00	\$36.81
As of 9/1/09 Carpentry work on wood-frame residential WEATHERIZATION projects shall be paid the RESIDENTIAL WOOD FRAME CARPENTER rate.						

Apprentice - CARPENTER (Residential Wood Frame) - Zone 2

Effective Date - 05/01/2011

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$14.54	\$6.34	\$0.00	\$0.00	\$20.88
2	60	\$14.54	\$6.34	\$6.23	\$0.00	\$27.11
3	65	\$15.76	\$6.34	\$6.23	\$0.00	\$28.33
4	70	\$16.97	\$6.34	\$6.23	\$0.00	\$29.54
5	75	\$18.18	\$6.34	\$6.23	\$0.00	\$30.75
6	80	\$19.39	\$6.34	\$6.23	\$0.00	\$31.96
7	85	\$20.60	\$6.34	\$6.23	\$0.00	\$33.17
8	90	\$21.82	\$6.34	\$6.23	\$0.00	\$34.39

Notes:

Apprentice to Journeyworker Ratio:1:5

RIDE-ON MOTORIZED BUGGY OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2014	\$34.85	\$7.30	\$12.95	\$0.00	\$55.10
	06/01/2015	\$35.60	\$7.30	\$12.95	\$0.00	\$55.85
	12/01/2015	\$36.35	\$7.30	\$12.95	\$0.00	\$56.60
	06/01/2016	\$37.10	\$7.30	\$12.95	\$0.00	\$57.35
	12/01/2016	\$38.10	\$7.30	\$12.95	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
ROLLER/SPREADER/MULCHING MACHINE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2014	\$41.99	\$10.00	\$14.30	\$0.00	\$66.29
	06/01/2015	\$42.73	\$10.00	\$14.30	\$0.00	\$67.03
	12/01/2015	\$43.97	\$10.00	\$14.30	\$0.00	\$68.27
	06/01/2016	\$44.72	\$10.00	\$14.30	\$0.00	\$69.02
	12/01/2016	\$45.95	\$10.00	\$14.30	\$0.00	\$70.25
	06/01/2017	\$46.94	\$10.00	\$14.30	\$0.00	\$71.24
	12/01/2017	\$47.93	\$10.00	\$14.30	\$0.00	\$72.23
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
ROOFER (Inc.Roofers Waterproofing &Roofers Damproofg) <i>ROOFERS LOCAL 33</i>	08/01/2014	\$39.21	\$10.50	\$11.60	\$0.00	\$61.31
	02/01/2015	\$40.11	\$10.50	\$11.60	\$0.00	\$62.21
	08/01/2015	\$41.01	\$10.50	\$11.60	\$0.00	\$63.11
	02/01/2016	\$41.91	\$10.50	\$11.60	\$0.00	\$64.01

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - ROOFER - Local 33
Effective Date - 08/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.61	\$10.50	\$3.38	\$0.00	\$33.49
2	60	\$23.53	\$10.50	\$11.60	\$0.00	\$45.63
3	65	\$25.49	\$10.50	\$11.60	\$0.00	\$47.59
4	75	\$29.41	\$10.50	\$11.60	\$0.00	\$51.51
5	85	\$33.33	\$10.50	\$11.60	\$0.00	\$55.43

Effective Date - 02/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.06	\$10.50	\$3.38	\$0.00	\$33.94
2	60	\$24.07	\$10.50	\$11.60	\$0.00	\$46.17
3	65	\$26.07	\$10.50	\$11.60	\$0.00	\$48.17
4	75	\$30.08	\$10.50	\$11.60	\$0.00	\$52.18
5	85	\$34.09	\$10.50	\$11.60	\$0.00	\$56.19

Notes: ** 1:5, 2:6-10, the 1:10; Reroofing: 1:4, then 1:1
Step 1 is 2000 hrs.; Steps 2-5 are 1000 hrs.

Apprentice to Journeyworker Ratio:**

ROOFER SLATE / TILE / PRECAST CONCRETE	08/01/2014	\$39.46	\$10.50	\$11.60	\$0.00	\$61.56
ROOFERS LOCAL 33	02/01/2015	\$40.36	\$10.50	\$11.60	\$0.00	\$62.46
	08/01/2015	\$41.26	\$10.50	\$11.60	\$0.00	\$63.36
	02/01/2016	\$42.16	\$10.50	\$11.60	\$0.00	\$64.26

For apprentice rates see "Apprentice- ROOFER"

SHEETMETAL WORKER	08/01/2014	\$42.79	\$9.82	\$20.54	\$2.19	\$75.34
SHEETMETAL WORKERS LOCAL 17 - A	02/01/2015	\$43.69	\$9.82	\$20.54	\$2.19	\$76.24
	08/01/2015	\$44.69	\$9.82	\$20.54	\$2.19	\$77.24
	02/01/2016	\$45.69	\$9.82	\$20.54	\$2.19	\$78.24
	08/01/2016	\$46.84	\$9.82	\$20.54	\$2.19	\$79.39
	02/01/2017	\$47.94	\$9.82	\$20.54	\$2.19	\$80.49
	08/01/2017	\$49.04	\$9.82	\$20.54	\$2.19	\$81.59
	02/01/2018	\$50.19	\$9.82	\$20.54	\$2.19	\$82.74

Classification
Effective Date
Base Wage
Health
Pension
**Supplemental
Unemployment**
Total Rate
Apprentice - SHEET METAL WORKER - Local 17-A
Effective Date - 08/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$17.12	\$9.82	\$4.58	\$0.00	\$31.52
2	40	\$17.12	\$9.82	\$4.58	\$0.00	\$31.52
3	45	\$19.26	\$9.82	\$9.09	\$1.15	\$39.32
4	45	\$19.26	\$9.82	\$9.09	\$1.15	\$39.32
5	50	\$21.40	\$9.82	\$9.91	\$1.23	\$42.36
6	50	\$21.40	\$9.82	\$10.16	\$1.24	\$42.62
7	60	\$25.67	\$9.82	\$11.55	\$1.41	\$48.45
8	65	\$27.81	\$9.82	\$12.38	\$1.50	\$51.51
9	75	\$32.09	\$9.82	\$14.02	\$1.68	\$57.61
10	85	\$36.37	\$9.82	\$15.16	\$1.84	\$63.19

Effective Date - 02/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$17.48	\$9.82	\$4.58	\$0.00	\$31.88
2	40	\$17.48	\$9.82	\$4.58	\$0.00	\$31.88
3	45	\$19.66	\$9.82	\$9.09	\$1.16	\$39.73
4	45	\$19.66	\$9.82	\$9.09	\$1.16	\$39.73
5	50	\$21.85	\$9.82	\$9.91	\$1.25	\$42.83
6	50	\$21.85	\$9.82	\$10.16	\$1.25	\$43.08
7	60	\$26.21	\$9.82	\$11.55	\$1.43	\$49.01
8	65	\$28.40	\$9.82	\$12.38	\$1.52	\$52.12
9	75	\$32.77	\$9.82	\$14.02	\$1.70	\$58.31
10	85	\$37.14	\$9.82	\$15.16	\$1.86	\$63.98

Notes:

Steps are 6 mos.

Apprentice to Journeyworker Ratio:1:4

SIGN ERECTOR

PAINTERS LOCAL 35 - ZONE 2

06/01/2013

\$25.81

\$7.07

\$7.05

\$0.00

\$39.93

Classification
Effective Date
Base Wage
Health
Pension
**Supplemental
Unemployment**
Total Rate
Apprentice - SIGN ERECTOR - Local 35 Zone 2
Effective Date - 06/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$12.91	\$7.07	\$0.00	\$0.00	\$19.98
2	55	\$14.20	\$7.07	\$2.45	\$0.00	\$23.72
3	60	\$15.49	\$7.07	\$2.45	\$0.00	\$25.01
4	65	\$16.78	\$7.07	\$2.45	\$0.00	\$26.30
5	70	\$18.07	\$7.07	\$7.05	\$0.00	\$32.19
6	75	\$19.36	\$7.07	\$7.05	\$0.00	\$33.48
7	80	\$20.65	\$7.07	\$7.05	\$0.00	\$34.77
8	85	\$21.94	\$7.07	\$7.05	\$0.00	\$36.06
9	90	\$23.23	\$7.07	\$7.05	\$0.00	\$37.35

Notes:

Steps are 4 mos.

Apprentice to Journeyworker Ratio:1:1
SPECIALIZED EARTH MOVING EQUIP < 35 TONS
TEAMSTERS JOINT COUNCIL NO. 10 ZONE A

12/01/2014	\$32.69	\$9.91	\$9.33	\$0.00	\$51.93
06/01/2015	\$33.04	\$9.91	\$9.33	\$0.00	\$52.28
08/01/2015	\$33.04	\$10.41	\$9.33	\$0.00	\$52.78
12/01/2015	\$33.04	\$10.41	\$10.08	\$0.00	\$53.53
06/01/2016	\$33.54	\$10.41	\$10.08	\$0.00	\$54.03
08/01/2016	\$33.54	\$10.91	\$10.08	\$0.00	\$54.53
12/01/2016	\$33.54	\$10.91	\$10.89	\$0.00	\$55.34

SPECIALIZED EARTH MOVING EQUIP > 35 TONS
TEAMSTERS JOINT COUNCIL NO. 10 ZONE A

12/01/2014	\$32.98	\$9.91	\$9.33	\$0.00	\$52.22
06/01/2015	\$33.33	\$9.91	\$9.33	\$0.00	\$52.57
08/01/2015	\$33.33	\$10.41	\$9.33	\$0.00	\$53.07
12/01/2015	\$33.33	\$10.41	\$10.08	\$0.00	\$53.82
06/01/2016	\$33.83	\$10.41	\$10.08	\$0.00	\$54.32
08/01/2016	\$33.83	\$10.91	\$10.08	\$0.00	\$54.82
12/01/2016	\$33.83	\$10.91	\$10.89	\$0.00	\$55.63

SPRINKLER FITTER
SPRINKLER FITTERS LOCAL 550 - (Section A) Zone 1

01/01/2015	\$53.58	\$8.42	\$14.75	\$0.00	\$76.75
03/01/2015	\$54.58	\$8.42	\$14.75	\$0.00	\$77.75
10/01/2015	\$55.73	\$8.42	\$14.75	\$0.00	\$78.90
01/01/2016	\$55.73	\$8.67	\$14.90	\$0.00	\$79.30
03/01/2016	\$56.73	\$8.67	\$14.90	\$0.00	\$80.30
10/01/2016	\$57.88	\$8.67	\$14.90	\$0.00	\$81.45
03/01/2017	\$58.88	\$8.67	\$14.90	\$0.00	\$82.45

Apprentice - SPRINKLER FITTER - Local 550 (Section A) Zone 1**Effective Date - 01/01/2015**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$18.75	\$8.42	\$8.40	\$0.00	\$35.57
2	40	\$21.43	\$8.42	\$8.40	\$0.00	\$38.25
3	45	\$24.11	\$8.42	\$8.40	\$0.00	\$40.93
4	50	\$26.79	\$8.42	\$8.40	\$0.00	\$43.61
5	55	\$29.47	\$8.42	\$8.40	\$0.00	\$46.29
6	60	\$32.15	\$8.42	\$8.40	\$0.00	\$48.97
7	65	\$34.83	\$8.42	\$8.40	\$0.00	\$51.65
8	70	\$37.51	\$8.42	\$8.40	\$0.00	\$54.33
9	75	\$40.19	\$8.42	\$8.40	\$0.00	\$57.01
10	80	\$42.86	\$8.42	\$8.40	\$0.00	\$59.68

Effective Date - 03/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$19.10	\$8.42	\$8.40	\$0.00	\$35.92
2	40	\$21.83	\$8.42	\$8.40	\$0.00	\$38.65
3	45	\$24.56	\$8.42	\$8.40	\$0.00	\$41.38
4	50	\$27.29	\$8.42	\$8.40	\$0.00	\$44.11
5	55	\$30.02	\$8.42	\$8.40	\$0.00	\$46.84
6	60	\$32.75	\$8.42	\$8.40	\$0.00	\$49.57
7	65	\$35.48	\$8.42	\$8.40	\$0.00	\$52.30
8	70	\$38.21	\$8.42	\$8.40	\$0.00	\$55.03
9	75	\$40.94	\$8.42	\$8.40	\$0.00	\$57.76
10	80	\$43.66	\$8.42	\$8.40	\$0.00	\$60.48

Notes: Apprentice entered prior 9/30/10:
40/45/50/55/60/65/70/75/80/85
Steps are 850 hours

Apprentice to Journeyworker Ratio:1:3

STEAM BOILER OPERATOR	12/01/2014	\$41.99	\$10.00	\$14.30	\$0.00	\$66.29
OPERATING ENGINEERS LOCAL 4	06/01/2015	\$42.73	\$10.00	\$14.30	\$0.00	\$67.03
	12/01/2015	\$43.97	\$10.00	\$14.30	\$0.00	\$68.27
	06/01/2016	\$44.72	\$10.00	\$14.30	\$0.00	\$69.02
	12/01/2016	\$45.95	\$10.00	\$14.30	\$0.00	\$70.25
	06/01/2017	\$46.94	\$10.00	\$14.30	\$0.00	\$71.24
	12/01/2017	\$47.93	\$10.00	\$14.30	\$0.00	\$72.23

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2014	\$41.99	\$10.00	\$14.30	\$0.00	\$66.29
	06/01/2015	\$42.73	\$10.00	\$14.30	\$0.00	\$67.03
	12/01/2015	\$43.97	\$10.00	\$14.30	\$0.00	\$68.27
	06/01/2016	\$44.72	\$10.00	\$14.30	\$0.00	\$69.02
	12/01/2016	\$45.95	\$10.00	\$14.30	\$0.00	\$70.25
	06/01/2017	\$46.94	\$10.00	\$14.30	\$0.00	\$71.24
	12/01/2017	\$47.93	\$10.00	\$14.30	\$0.00	\$72.23
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TELECOMMUNICATION TECHNICIAN <i>ELECTRICIANS LOCAL 103</i>	09/01/2014	\$33.59	\$13.00	\$13.36	\$0.00	\$59.95
	03/01/2015	\$33.88	\$13.00	\$13.70	\$0.00	\$60.58
	09/01/2015	\$34.60	\$13.00	\$13.72	\$0.00	\$61.32
	03/01/2016	\$35.31	\$13.00	\$13.74	\$0.00	\$62.05

Apprentice - TELECOMMUNICATION TECHNICIAN - Local 103

Effective Date - 09/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$13.44	\$13.00	\$0.40	\$0.00	\$26.84
2	40	\$13.44	\$13.00	\$0.40	\$0.00	\$26.84
3	45	\$15.12	\$13.00	\$10.57	\$0.00	\$38.69
4	45	\$15.12	\$13.00	\$10.57	\$0.00	\$38.69
5	50	\$16.80	\$13.00	\$10.83	\$0.00	\$40.63
6	55	\$18.47	\$13.00	\$11.08	\$0.00	\$42.55
7	60	\$20.15	\$13.00	\$11.33	\$0.00	\$44.48
8	65	\$21.83	\$13.00	\$11.59	\$0.00	\$46.42
9	70	\$23.51	\$13.00	\$11.85	\$0.00	\$48.36
10	75	\$25.19	\$13.00	\$12.10	\$0.00	\$50.29

Effective Date - 03/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$13.55	\$13.00	\$0.41	\$0.00	\$26.96
2	40	\$13.55	\$13.00	\$0.41	\$0.00	\$26.96
3	45	\$15.25	\$13.00	\$10.87	\$0.00	\$39.12
4	45	\$15.25	\$13.00	\$10.87	\$0.00	\$39.12
5	50	\$16.94	\$13.00	\$11.13	\$0.00	\$41.07
6	55	\$18.63	\$13.00	\$11.38	\$0.00	\$43.01
7	60	\$20.33	\$13.00	\$11.64	\$0.00	\$44.97
8	65	\$22.02	\$13.00	\$11.89	\$0.00	\$46.91
9	70	\$23.72	\$13.00	\$12.15	\$0.00	\$48.87
10	75	\$25.41	\$13.00	\$12.41	\$0.00	\$50.82

Notes:

Apprentice to Journeyworker Ratio:1:1

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TERRAZZO FINISHERS <i>BRICKLAYERS LOCAL 3 - MARBLE & TILE</i>	08/01/2014	\$47.90	\$10.18	\$18.22	\$0.00	\$76.30
	02/01/2015	\$47.90	\$10.18	\$18.50	\$0.00	\$76.58
	08/01/2015	\$48.80	\$10.18	\$18.57	\$0.00	\$77.55
	02/01/2016	\$49.37	\$10.18	\$18.57	\$0.00	\$78.12
	08/01/2016	\$50.27	\$10.18	\$18.65	\$0.00	\$79.10
	02/01/2017	\$50.84	\$10.18	\$18.65	\$0.00	\$79.67

Apprentice - TERRAZZO FINISHER - Local 3 Marble & Tile

Effective Date - 08/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.95	\$10.18	\$18.22	\$0.00	\$52.35
2	60	\$28.74	\$10.18	\$18.22	\$0.00	\$57.14
3	70	\$33.53	\$10.18	\$18.22	\$0.00	\$61.93
4	80	\$38.32	\$10.18	\$18.22	\$0.00	\$66.72
5	90	\$43.11	\$10.18	\$18.22	\$0.00	\$71.51

Effective Date - 02/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.95	\$10.18	\$18.50	\$0.00	\$52.63
2	60	\$28.74	\$10.18	\$18.50	\$0.00	\$57.42
3	70	\$33.53	\$10.18	\$18.50	\$0.00	\$62.21
4	80	\$38.32	\$10.18	\$18.50	\$0.00	\$67.00
5	90	\$43.11	\$10.18	\$18.50	\$0.00	\$71.79

Notes:

Apprentice to Journeyworker Ratio:1:3

TEST BORING DRILLER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2014	\$35.95	\$7.30	\$13.15	\$0.00	\$56.40
	06/01/2015	\$36.70	\$7.30	\$13.15	\$0.00	\$57.15
	12/01/2015	\$37.45	\$7.30	\$13.15	\$0.00	\$57.90
	06/01/2016	\$38.20	\$7.30	\$13.15	\$0.00	\$58.65
	12/01/2016	\$39.20	\$7.30	\$13.15	\$0.00	\$59.65

For apprentice rates see "Apprentice- LABORER"

TEST BORING DRILLER HELPER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2014	\$34.67	\$7.30	\$13.15	\$0.00	\$55.12
	06/01/2015	\$35.42	\$7.30	\$13.15	\$0.00	\$55.87
	12/01/2015	\$36.17	\$7.30	\$13.15	\$0.00	\$56.62
	06/01/2016	\$36.92	\$7.30	\$13.15	\$0.00	\$57.37
	12/01/2016	\$37.92	\$7.30	\$13.15	\$0.00	\$58.37

For apprentice rates see "Apprentice- LABORER"

TEST BORING LABORER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2014	\$34.55	\$7.30	\$13.15	\$0.00	\$55.00
	06/01/2015	\$35.30	\$7.30	\$13.15	\$0.00	\$55.75
	12/01/2015	\$36.05	\$7.30	\$13.15	\$0.00	\$56.50
	06/01/2016	\$36.80	\$7.30	\$13.15	\$0.00	\$57.25
	12/01/2016	\$37.80	\$7.30	\$13.15	\$0.00	\$58.25

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TRACTORS/PORTABLE STEAM GENERATORS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2014	\$41.99	\$10.00	\$14.30	\$0.00	\$66.29
	06/01/2015	\$42.73	\$10.00	\$14.30	\$0.00	\$67.03
	12/01/2015	\$43.97	\$10.00	\$14.30	\$0.00	\$68.27
	06/01/2016	\$44.72	\$10.00	\$14.30	\$0.00	\$69.02
	12/01/2016	\$45.95	\$10.00	\$14.30	\$0.00	\$70.25
	06/01/2017	\$46.94	\$10.00	\$14.30	\$0.00	\$71.24
	12/01/2017	\$47.93	\$10.00	\$14.30	\$0.00	\$72.23
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TRAILERS FOR EARTH MOVING EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2014	\$33.27	\$9.91	\$9.33	\$0.00	\$52.51
	06/01/2015	\$33.62	\$9.91	\$9.33	\$0.00	\$52.86
	08/01/2015	\$33.62	\$10.41	\$9.33	\$0.00	\$53.36
	12/01/2015	\$33.62	\$10.41	\$10.08	\$0.00	\$54.11
	06/01/2016	\$34.12	\$10.41	\$10.08	\$0.00	\$54.61
	08/01/2016	\$34.12	\$10.91	\$10.08	\$0.00	\$55.11
	12/01/2016	\$34.12	\$10.91	\$10.89	\$0.00	\$55.92
TUNNEL WORK - COMPRESSED AIR <i>LABORERS (COMPRESSED AIR)</i>	12/01/2014	\$46.83	\$7.30	\$13.55	\$0.00	\$67.68
	06/01/2015	\$47.58	\$7.30	\$13.55	\$0.00	\$68.43
	12/01/2015	\$48.33	\$7.30	\$13.55	\$0.00	\$69.18
	06/01/2016	\$49.08	\$7.30	\$13.55	\$0.00	\$69.93
	12/01/2016	\$50.08	\$7.30	\$13.55	\$0.00	\$70.93
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE) <i>LABORERS (COMPRESSED AIR)</i>	12/01/2014	\$48.83	\$7.30	\$13.55	\$0.00	\$69.68
	06/01/2015	\$49.58	\$7.30	\$13.55	\$0.00	\$70.43
	12/01/2015	\$50.33	\$7.30	\$13.55	\$0.00	\$71.18
	06/01/2016	\$51.08	\$7.30	\$13.55	\$0.00	\$71.93
	12/01/2016	\$52.08	\$7.30	\$13.55	\$0.00	\$72.93
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - FREE AIR <i>LABORERS (FREE AIR TUNNEL)</i>	12/01/2014	\$38.90	\$7.30	\$13.55	\$0.00	\$59.75
	06/01/2015	\$39.65	\$7.30	\$13.55	\$0.00	\$60.50
	12/01/2015	\$40.40	\$7.30	\$13.55	\$0.00	\$61.25
	06/01/2016	\$41.15	\$7.30	\$13.55	\$0.00	\$62.00
	12/01/2016	\$42.15	\$7.30	\$13.55	\$0.00	\$63.00
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - FREE AIR (HAZ. WASTE) <i>LABORERS (FREE AIR TUNNEL)</i>	12/01/2014	\$40.90	\$7.30	\$13.55	\$0.00	\$61.75
	06/01/2015	\$41.65	\$7.30	\$13.55	\$0.00	\$62.50
	12/01/2015	\$42.40	\$7.30	\$13.55	\$0.00	\$63.25
	06/01/2016	\$43.15	\$7.30	\$13.55	\$0.00	\$64.00
	12/01/2016	\$44.15	\$7.30	\$13.55	\$0.00	\$65.00
For apprentice rates see "Apprentice- LABORER"						
VAC-HAUL <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2014	\$32.69	\$9.91	\$9.33	\$0.00	\$51.93
	06/01/2015	\$33.04	\$9.91	\$9.33	\$0.00	\$52.28
	08/01/2015	\$33.04	\$10.41	\$9.33	\$0.00	\$52.78
	12/01/2015	\$33.04	\$10.41	\$10.08	\$0.00	\$53.53
	06/01/2016	\$33.54	\$10.41	\$10.08	\$0.00	\$54.03
	08/01/2016	\$33.54	\$10.91	\$10.08	\$0.00	\$54.53
	12/01/2016	\$33.54	\$10.91	\$10.89	\$0.00	\$55.34

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
WAGON DRILL OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2014	\$34.85	\$7.30	\$12.95	\$0.00	\$55.10
	06/01/2015	\$35.60	\$7.30	\$12.95	\$0.00	\$55.85
	12/01/2015	\$36.35	\$7.30	\$12.95	\$0.00	\$56.60
	06/01/2016	\$37.10	\$7.30	\$12.95	\$0.00	\$57.35
	12/01/2016	\$38.10	\$7.30	\$12.95	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
WASTE WATER PUMP OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2014	\$42.39	\$10.00	\$14.30	\$0.00	\$66.69
	06/01/2015	\$43.14	\$10.00	\$14.30	\$0.00	\$67.44
	12/01/2015	\$44.39	\$10.00	\$14.30	\$0.00	\$68.69
	06/01/2016	\$45.14	\$10.00	\$14.30	\$0.00	\$69.44
	12/01/2016	\$46.39	\$10.00	\$14.30	\$0.00	\$70.69
	06/01/2017	\$47.39	\$10.00	\$14.30	\$0.00	\$71.69
	12/01/2017	\$48.39	\$10.00	\$14.30	\$0.00	\$72.69
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
WATER METER INSTALLER <i>PLUMBERS & GASFITTERS LOCAL 12</i>	09/01/2014	\$49.66	\$10.32	\$14.54	\$0.00	\$74.52
	03/01/2015	\$50.66	\$10.32	\$14.54	\$0.00	\$75.52
	09/01/2015	\$51.66	\$10.32	\$14.54	\$0.00	\$76.52
	03/01/2016	\$52.81	\$10.32	\$14.54	\$0.00	\$77.67
	09/01/2016	\$53.86	\$10.32	\$14.54	\$0.00	\$78.72
	03/01/2017	\$54.86	\$10.32	\$14.54	\$0.00	\$79.72
For apprentice rates see "Apprentice- PLUMBER/PIPEFITTER" or "PLUMBER/GASFITTER"						
Outside Electrical - East						
CABLE TECHNICIAN (Power Zone) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/01/2013	\$25.66	\$8.70	\$4.48	\$0.00	\$38.84
For apprentice rates see "Apprentice- LINEMAN"						
CABLEMAN (Underground Ducts & Cables) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/01/2013	\$36.55	\$8.70	\$6.58	\$0.00	\$51.83
For apprentice rates see "Apprentice- LINEMAN"						
DRIVER / GROUNDMAN CDL <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/01/2013	\$29.94	\$8.70	\$6.05	\$0.00	\$44.69
For apprentice rates see "Apprentice- LINEMAN"						
DRIVER / GROUNDMAN -Inexperienced (<2000 Hrs) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/01/2013	\$23.52	\$8.70	\$5.24	\$0.00	\$37.46
For apprentice rates see "Apprentice- LINEMAN"						
EQUIPMENT OPERATOR (Class A CDL) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/01/2013	\$36.35	\$8.70	\$9.43	\$0.00	\$54.48
For apprentice rates see "Apprentice- LINEMAN"						
EQUIPMENT OPERATOR (Class B CDL) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/01/2013	\$32.08	\$8.70	\$6.59	\$0.00	\$47.37
For apprentice rates see "Apprentice- LINEMAN"						
GROUNDMAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/01/2013	\$23.52	\$8.70	\$3.72	\$0.00	\$35.94
For apprentice rates see "Apprentice- LINEMAN"						
GROUNDMAN -Inexperienced (<2000 Hrs.) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/01/2013	\$19.25	\$8.70	\$2.85	\$0.00	\$30.80
For apprentice rates see "Apprentice- LINEMAN"						
JOURNEYMAN LINEMAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/01/2013	\$42.77	\$8.70	\$11.78	\$0.00	\$63.25

Apprentice - LINEMAN (Outside Electrical) - East Local 104

Effective Date - 09/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$25.66	\$8.70	\$4.24	\$0.00	\$38.60
2	65	\$27.80	\$8.70	\$4.71	\$0.00	\$41.21
3	70	\$29.94	\$8.70	\$5.43	\$0.00	\$44.07
4	75	\$32.08	\$8.70	\$6.16	\$0.00	\$46.94
5	80	\$34.22	\$8.70	\$6.88	\$0.00	\$49.80
6	85	\$36.35	\$8.70	\$7.62	\$0.00	\$52.67
7	90	\$38.49	\$8.70	\$8.83	\$0.00	\$56.02

Notes:

Apprentice to Journeyworker Ratio:1:2

TELEDATA CABLE SPLICER <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	07/16/2012	\$26.33	\$4.18	\$2.79	\$0.00	\$33.30
TELEDATA LINEMAN/EQUIPMENT OPERATOR <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	07/16/2012	\$24.78	\$4.18	\$2.74	\$0.00	\$31.70
TELEDATA WIREMAN/INSTALLER/TECHNICIAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	07/16/2012	\$24.78	\$4.18	\$2.74	\$0.00	\$31.70
TREE TRIMMER <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	01/29/2012	\$17.18	\$3.37	\$0.00	\$0.00	\$20.55
This classification applies only to tree work done: (a) for a utility company, R.E.A. cooperative, or railroad or coal mining company, and (b) for the purpose of operating, maintaining, or repairing the utility company's equipment, and (c) by a person who is using hand or mechanical cutting methods and is not on the ground. This classification does not apply to wholesale tree removal.						
TREE TRIMMER GROUNDMAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	01/29/2012	\$15.15	\$3.37	\$0.00	\$0.00	\$18.52
This classification applies only to tree work done: (a) for a utility company, R.E.A. cooperative, or railroad or coal mining company, and (b) for the purpose of operating, maintaining, or repairing the utility company's equipment, and (c) by a person who is using hand or mechanical cutting methods and is on the ground. This classification does not apply to wholesale tree removal.						

Additional Apprentice Information:

Minimum wage rates for apprentices employed on public works projects are listed above as a percentage of the pre-determined hourly wage rate established by the Commissioner under the provisions of the M.G.L. c. 149, ss. 26-27D. Apprentice ratios are established by the Division of Apprenticeship Training pursuant to M.G.L. c. 23, ss. 11E-11L.

All apprentices must be registered with the Division of Apprenticeship Training in accordance with M.G.L. c. 23, ss. 11E-11L.

All steps are six months (1000 hours.)

Ratios are expressed in allowable number of apprentices to journeymen or fraction thereof, unless otherwise specified.

**** Multiple ratios are listed in the comment field.**

***** APP to JM; 1:1, 2:2, 2:3, 3:4, 4:4, 4:5, 4:6, 5:7, 6:7, 6:8, 6:9, 7:10, 8:10, 8:11, 8:12, 9:13, 10:13, 10:14, etc.**

****** APP to JM; 1:1, 1:2, 2:3, 2:4, 3:5, 4:6, 4:7, 5:8, 6:9, 6:10, 7:11, 8:12, 8:13, 9:14, 10:15, 10:16, etc.**

SECTION 01010-GENERAL REQUIREMENTS

1.01 TIME OF THE COMPLETION OF THE WORK

- A. The work which the Contractor is required to perform under this Contract shall be commenced at the time stipulated by the Town of Arlington and shall be fully completed within the time stipulated except as the work may be interrupted by weather conditions and hereinafter specified. The Contractor shall employ sufficient equipment and workmen to complete the installation as expeditiously as possible as directed by the Town. If, in the opinion of the Town, the progress of the work of the Contractor does not, at any time, clearly demonstrate that the completion of the installation will meet with the approval of the Town, the Town reserves the right to require the Contractor to employ such additional equipment and workmen as required, all without additional cost to the Town.
- B. The Town of Arlington shall determine when the work shall be interrupted due to unsatisfactory weather conditions. Determination of the period to be included in the Time of Completion shall cease when the Town directs that the work stop due to the weather and shall commence again on the first working day thereafter that the Town may designate for the work to be resumed.
- C. The Contractor shall cooperate with all utility companies and the Town of Arlington Department of Public Works and shall schedule his demolition, construction and deliveries so that all work shall be complete and ready for the Town's use no later than the date stipulated in the signed Contract with the Town.

1.02 RESPONSIBILITIES OF THE CONTRACTOR

- A. The Contractor shall be responsible for all work on site during the life of the project and shall have a duly authorized representative on site continuously supervising and directing all activities, including but not limited to preparation for construction, receiving of materials and all other work associated with completing the project.
- B. The Contractor shall be responsible for continuously supervising and directing all employees of the Contractor, all tiers of Subcontractors, all persons involved in supplying or delivering materials to the site all persons involved in any other activities on the site.
- C. Safety of all persons and equipment is the responsibility of the Contractor twenty-four hours a day, and he shall continuously supervise and direct the work so that it is accomplished so as to preclude injury to persons or damage to equipment.

- D. Except as otherwise specifically stated in the Contract Document and the Technical Specifications, the Contractor shall provide and pay for all materials, tools, labor, equipment, water, light, heat, power, transportation, superintendence, temporary construction of every nature, charges, levies, fees or other expenses, permits and back charges and all other services and facilities of every nature whatsoever necessary for the performance of the Contract and to deliver all improvements embraced in this Contract completed in every respect within the specified time.
- E. Unless otherwise specified herein all materials, workmanship, methods, and practices shall conform to the current standards of the appropriate governing agency and/or the Town of Arlington's standards.
- F. The Contractor shall be responsible for detailed layout, all stake-out and grade control, and shall employ a registered Professional Engineer or a registered Land Surveyor for these purposes.
- G. The Contractor shall verify dimensions and utility locations on the plans and if any inconsistencies or discrepancies between the Drawings and actual field conditions or between the Drawings and Specifications. The Contractor shall immediately notify the Town of any inconsistencies. The Contractor will be held responsible for any errors resulting from his failure to exercise the aforementioned precaution. Such information shall be marked on the copies of the Drawings and submitted to the Town and shall be incorporated into the As-built Record Drawings.
- H. As soon as the Contract is executed, the Contractor shall order materials, submit construction schedules as hereinafter specified. The work of construction shall begin at the time stipulated by the Town and shall be completed within the Time of Completion specified.
- I. It is the Contractor's responsibility to make his own investigation and to satisfy himself as to subsurface conditions and to insure that these are reflected in his bid.
- J. In order to verify locations of utilities and varying field conditions exploratory excavations are necessary. The cost of explorations shall be included in the contract price bid.
- K. If it becomes necessary for the Contractor to obtain permits the cost of all permits shall be included in the contract price bid.
- L. The Contractor shall fully inform himself of existing conditions of the site before submitting his bid, and shall be fully responsible for carrying out all work required to fully and properly execute the work of the Contract,

regardless of the conditions encountered in the actual work. No claim for extra compensation or extension of time will be allowed on account of actual conditions inconsistent with those assumed, except those conditions described under the GENERAL CONDITIONS.

- M. The Contractor shall be responsible for the location, sealing, disconnection and/or protection of all existing utilities such as water, gas, sewers, steam, electricity and telephone in accordance with the regulations of the utility concerned.
- N. The Contractor shall be solely responsible for judging the full extent of work requirements involved, including but not limited to the potential need for storing materials temporarily and/or rehandling items prior to final installation.
- O. The Contractor shall verify all utility conditions and elevations prior to work. Before construction starts, all utility companies, public and private, must be contacted, including those in control of utilities not shown on this plan. See Chapter 370 Acts of 1963 Massachusetts and contact "DIG SAFE" 1-800-322-4844. Report any discrepancies in writing to the Landscape Architect and the Town and receive written instructions prior to proceeding.

1.03 MANNER OF CONDUCTING THE WORK

- A. The work shall be conducted with prime consideration given to the following:
 - 1. Compliance with Americans with Disabilities Act requirements.
 - 2. Compliance with governing laws and building codes.
 - 3. Safety, protection, and convenience of the public and workmen.
 - 4. Protection of the existing building structure, materials and finishes to remain from damage.
 - 5. Minimization of dirt and dust proliferation.
 - 6. Avoidance of any damage to existing vegetation to remain.
- B. All work shall be done in accordance with the governing laws and building codes and all necessary permits required for the Site Preparation work shall be procured by the Contractor. Provide unobstructed legal exits at all times.

1.04 DEBRIS AND SURPLUS MATERIAL

- A. All debris and waste material, scrap or salvageable material generated by the work and which is, in the opinion of the Landscape Architect and Town, unsuitable for construction shall be removed from the property by the Contractor daily and disposed of in accordance with federal, state and

local regulations. All bituminous pavement, PCC pavement, concrete structures and pipe shall be considered unsuitable. Debris shall not be permitted to accumulate and the work shall be kept satisfactorily clean at all times.

1.05 TEMPORARY FACILITIES

A. General Provisions:

1. Furnish all labor, materials and services to fulfill the requirements for temporary facilities, at no additional cost to the Town, and comply with all requirements set forth herein, except where said requirements are in conflict with federal, state or local laws, rules and regulations, in which case(s) the applicable federal, state or local requirements shall govern.

B. Temporary Light and Power:

1. Make all necessary arrangements with the local electrical company, and pay all costs including labor, in operating and maintaining all temporary services for electricity used during the construction, unless specifically noted otherwise.
2. Ensure that temporary wiring, outlets, and lighting are provided in accordance with the requirements of Bulletin No. 12, Division of Industrial Safety, Department of Public Safety, Commonwealth of Massachusetts.

C. Contractor shall repair the site as required to return the disturbed areas to a condition equal to their original condition if the locations are not part of the proposed site improvements under this Contract.

1.06 RECORD DRAWINGS

- A. The Contractor shall cooperate with the Landscape Architect and Town and shall prepare and maintain a set of drawings on which shall be recorded accurately, as the work progresses, the actual "as-built" locations and dimensions of all his work, including thereon all variations from the Contract Drawings. This record of "as-built" conditions shall include the work of all subcontractors and shall be submitted, upon final acceptance of all work, to the Town.
- B. Prior to final acceptance of the work, all "as built" data shall be transferred by the Contractor to a complete set of reproducible record drawings in ink or photolitho reproductions on mylar (4 mm), furnished by the Town. This work shall be performed by the Contractor's Registered Land Surveyor with the cooperation of the Contractor as required. After

review and approval by the Town the "Record As-built Drawings" will be completed and delivered to the Town.

1.07 SHOP DRAWINGS, PRODUCT LITERATURE AND SAMPLES

A. Shop drawings shall include fabrication and installation drawings, setting diagrams, schedules, patterns, templates and similar drawings. Include the following information:

1. Dimensions.
2. Identification of products and materials included.
3. Compliance with specified standards.
4. Notation of coordination requirements.
5. Notation of dimensions established by field measurement.
6. Sheet Size: Except for templates, patterns and similar full-size drawings, submit shop drawings on sheets at least 8-1/2" x 11" but no larger than 36" x 48".
7. Submit one correctable translucent reproducible print and four blue- or blackline prints for the Landscape Architect's review.
8. Submit two prints where required for maintenance manuals.
9. Do not use shop drawings without an appropriate final stamp indicating action taken in connection with construction.
10. Coordination drawings are a special type of shop drawing that shows the relationship and integration of different construction elements that require careful coordination during fabrication or installation to fit in the space provided or function as intended.
11. Coordination drawings may include components previously shown in detail on shop drawings or product data.
12. Submit coordination drawings for integration of different construction elements. Show sequences and relationships of separate components to avoid conflicts in use of space.

B. Product Literature:

1. Collect product literature into a single submittal for each element of construction or system. Product literature includes printed information such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams and performance curves. Where product literature must be specially prepared because standard printed data is not suitable for use, submit as "Shop Drawings" Submit four copies of all product literature.
 - a. Mark each copy to show applicable choices and options. Where printed product data includes information on several products, some of which are not required, mark copies to

indicate the applicable information. Include the following information:

- 1) Manufacturer's printed recommendations.
- 2) Compliance with recognized trade association standards.
- 3) Compliance with recognized testing agency standards.
- 4) Application of testing agency labels and seals.
- 5) Notation of dimensions verified by field measurement.
- 6) Notation of coordination requirements.

- b. Do not submit product literature until compliance with requirements of the Contract Documents has been confirmed.

- C. Submit full size, fully fabricated samples cured and finished as specified and physically identical with the material or product proposed. Samples include partial sections of manufactured or fabricated components, cuts or containers of materials, color range sets and swatches showing color, texture and pattern.

1. Mount, display or package samples in the manner specified to facilitate review of qualities indicated. Prepare samples to include the following:

- a. General description of the sample.
- b. Sample source.
- c. Product name or name of manufacturer.
- d. Compliance with recognized standards.
- e. Availability and delivery time.

2. Submit samples for review of kind, color, pattern and texture, for a final check of these characteristics with other elements and for a comparison of these characteristics between the final submittal and the actual component as delivered and installed.

- a. Where variation in color, pattern, texture or other characteristics is inherent in the material or product represented, submit multiple units (not less than three unless otherwise specified in a specific section of the specification) that show approximate limits of the variations.
- b. Refer to other Specification Sections for requirements for samples that illustrate workmanship, fabrication techniques, details of assembly, connections, operation and similar construction characteristics.

- c. Refer to other Sections for samples to be returned to the Contractor for incorporation into the work. Such samples must be undamaged at time of use. On the transmittal, indicate special requests regarding disposition of sample submittals.
- D. The Contractor shall be responsible for the prompt submission of all shop drawings, product literature and samples so that there will be no delay in the work.
- E. In the instance of any discrepancies between the drawings and the actual dimensions or size of materials, the Contractor shall be responsible to make any and all adjustments necessary to install the materials as set forth in the Contract Documents.
- F. The approval of shop drawings will be general and shall not relieve the Contractor from the responsibility for details of design, dimensions, etc., necessary for proper fittings and construction of the work as required by the Contract and to ensure the safety of the public.

1.08 PROVISIONS OF TRAFFIC

- A. The Contractor shall not close or obstruct any portion of a street without obtaining permits therefor from the proper municipal authorities and with the knowledge of the Town. If any street or private way shall be rendered unsafe by the Contractor's operations he shall make such repairs or provide such temporary ways or guards as shall be acceptable to the Town.
- B. Streets, roads, private ways and walks shall be maintained passable by the Contractor at his expense, and the Contractor shall assume full responsibility for the adequacy and safety of provisions made. He shall conduct his construction operations such that interference with the flow of vehicular and pedestrian traffic shall be held to a minimum.
- C. The Contractor shall cooperate in every way possible with the municipal authorities maintaining a flow of traffic through the site. The Contractor shall notify the Town and the Town of Arlington Fire Department and Police Department when any street is to be closed regardless of the length of time or time of day.
- D. All detours for both vehicular and pedestrian movement shall be signed and lighted as directed by the Town of Arlington.

1.09 SITE INSPECTION

- A. It shall be contingent upon the Contractor to inspect the site as an aid to determining the extent of his work under the various contract items prior to submission of his bid.

1.10 PROTECTION OF EXISTING STRUCTURES

- A. All existing walks, pipes, conduits, poles, curbing, walls, buildings, trees and other structures and items which are to remain in place shall be carefully supported and protected from injury by the Contractor without additional compensation and in case of injury they shall be restored by him without compensation therefor to as good condition as that in which they were found.
- B. The Contractor shall, at his own expense, provide suitable and safe bridges and other crossings, where required for accommodation of travel and to provide access to private property during construction and shall remove said structures thereafter without additional cost to the Town.
- C. Utility lines shown are located from the best information available. Services may not be shown. The existence of utilities which are normally located in the streets or on the site and not shown on the plans shall not be considered as an unusual obstacle, and the Contractor shall not be entitled to extra compensation for maintaining, protecting, or restoring utilities which he disturbs.

1.11 VALIDITY OF DOCUMENTS

- A. If any part of the Contract Documents, or the application of the same to any situation, shall to any extent be invalidated or contrary to the law, the remainder of such documents and the application to the other situations or any provisions found invalid as to any given situation, shall not be affected thereby.

1.12 WATER AND PUMPING

- A. The Contractor shall at all times protect the excavation, trenches and existing or adjacent buildings from damages from rain water, spring water, ground water, backing up of drains and sewer, and from all other water.
- B. All excavated portions shall be maintained free from water at all times, no matter what the sources, by means of temporary pumping equipment.
- C. Contractor shall provide all necessary pumps, drains and well points for removing water from trenches, footings and other parts of the work.

1.13 EMERGENCIES

- A. The Contractor shall furnish to the Town, in writing, with a copy to the Landscape Architect, the names, addresses and telephone numbers of the members of his or his Principal Subcontractor's organizations to be contacted in the event of an emergency at the construction site.

- END OF SECTION -

SECTION 01230

ALTERNATES

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. All of the Contract Documents, including the General and Supplementary Conditions and Division 0 – Bidding Documents, Contract Forms, and Conditions of the Contract and Division 1 – General Requirements, apply to the work of this Section.
- B. Carefully examine all the Contract Documents for requirements that affect the work of this Section. The exact scope of this Section cannot be determined without a thorough review of all specification sections and other Contract Documents.

1.02 SUMMARY

- A. The Schedule of Alternates included in this Section lists all the Alternates that appear in the Contract Documents, and the primary Specification Sections which are affected by each Alternate. Completion of the work of each alternate may require work described in other specification sections. Contractor is responsible for fully examining the scope of work of each alternate and including all work required for the full completion of each alternate in their price.
- B. For each of the alternates scheduled at the end of this Section, state the amount in the proposal to be added to or deducted from the Contract Sum for the work in the appropriate place on the Alternate Bid Form.
- C. Consult the individual Specification Sections for detailed requirements of each Alternate.

1.03 GENERAL INSTRUCTIONS

- A. Each Bidder shall be held fully responsible for examining the scope of the Alternates generally defined herein and for recognizing any modifications to his work caused by any Alternate.
- B. The Bid Alternate Price shall be complete cost, including overhead, profit, bonds, insurance, transportation, and all other costs connected with, or incidental to the work described.
- C. Alternates listed below in the Schedule of Alternates are listed in order. The Contract will be awarded on the basis of the Base Bid only or the Base Bid plus Alternates taken in order.

1.04 ALTERNATES

- A. Definition: "Alternates" are alternate products, materials, equipment, systems, methods, units of work or major elements of the construction, which may, at the Authority's option

and under the terms established by the Contract or Agreement, be selected for the work in lieu of the corresponding requirements of the Contract Documents.

- B. Alternate Requirements: A Schedule of Alternates is included at the end of this Section. Each alternate is defined using abbreviated language, recognizing that the Contract Documents define the requirements. Coordinate related work to ensure that work affected by each alternate is complete and properly interfaced with work of each selected alternate.
- C. Provide written proposals for each alternate on the Bid Form for Authority's consideration. Each proposal amount shall include the entire cost of the alternate portion of the work including overhead, profit, and other costs including cost of interfacing and coordinating the alternate with related and adjacent work.

1.05 SCHEDULE OF ALTERNATES

A. Alternate No. 1 – Installation of the Quick Start junior tennis court

- 1. Work: Contractor shall provide and install a QuickStart junior tennis court, complete with base, paving, pavement marking and coating, fences, gates, tennis posts and net and all other required elements for a complete installation as indicated in the Contract Documents. Refer to the following Specification Sections for the work of Alternate No. 1:

02200	Earthwork
02510	Bituminous Concrete Pavement
02580	Pavement Marking
02870	Site Furnishings
02875	Fencing

B. Alternate No. 2 – Bike Rack Area

- 1. Work: Contractor shall provide and install the bike rack area, complete with base, paving and bike rack and all other required elements for a complete installation as indicated in the Contract Documents. Refer to the following Specification Sections for the work of Alternate No. 1:

02200	Earthwork
02510	Bituminous Concrete Pavement
02870	Site Furnishings

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

- - - END OF SECTION - - -

SECTION 02000

SITE WORK

PART 1 GENERAL

1.01 DESCRIPTION

- A. These general site work requirements apply to all site work operations. Refer to Division 2 specification sections for specific general, product, and execution requirements.

1.02 QUALITY ASSURANCE

- A. Comply with all applicable local, state, and federal requirements regarding materials, methods of work, and disposal of excess and waste materials.
- B. Obtain and pay for all required inspections, permits, and fees. Provide notices required by governmental authorities.
- C. Install Erosion Control prior to commencing other site operations. Obtain Arlington Conservation Commission approval of installed erosion control.
- D. Observe all requirements of the Arlington Conservation Commission Order of Conditions throughout the construction process. Obtain required approvals at the appropriate time. Order of Conditions is appended to these bid documents.

1.03 PROJECT CONDITIONS

- A. Locate and identify existing underground and overhead services and utilities within contract limit work areas. Provide adequate means of protection of utilities and services designated to remain. Repair utilities damaged during site work operations at Contractor's expense.
- B. Arrange for disconnection, disconnect and seal or cap all utilities and services designated to be removed before start of site work operations. Perform all work in accordance with the requirements of the applicable utility company or agency involved.
- C. When uncharted or incorrectly charted underground piping or other utilities and services are encountered during site work operations, notify the applicable utility company immediately to obtain procedure directions. Cooperate with the applicable utility company in maintaining active services in operation.
- D. Locate, protect, and maintain bench marks, monuments, control points and project engineering reference points. Re-establish disturbed or destroyed items at Contractor's expense.
- E. Perform site work operations and the removal of debris and waste materials to assure minimum interference with streets, walks, and other adjacent facilities.

- F. Obtain governing authorities written permission when required to close or obstruct street, walks and adjacent facilities. Provide alternate routes around closed or obstruct street, walks and adjacent facilities. Provide alternate routes around closed or obstructed traffic ways when required by governing authorities.
- G. Control dust caused by the work. Dampen surfaces as required. Comply with pollution control regulations of governing authorities.
- H. Protect existing buildings, paving, and other services or facilities on site and adjacent to the site from damage caused by site work operations. Cost of repair and restoration of damaged items at Contractor's expense.
- I. Protect and maintain street lights, utility poles and services, traffic signal control boxes, curb boxes, valves and other services, except items designated for removal. Remove or coordinate the removal of traffic signs, parking meters and postal mail boxes with the applicable governmental agency. Provide for temporary relocation when required to maintain facilities and services in operation during construction work.

PART 2 PRODUCTS

2.01 MATERIALS AND EQUIPMENT

- A. Materials and equipment: As selected by Contractor, except as indicated.

PART 3 EXECUTION

3.01 PREPARATION

- A. Examine the areas and conditions under which site work is performed. Do not proceed with the work until unsatisfactory conditions are corrected.
- B. Consult the records and drawings of adjacent work and of existing services and utilities which may affect site work operations.

END OF SECTION

SECTION 02100
SITE PREPARATION

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. The General Documents, as listed in the Table of Contents, and applicable parts of Division 1, General Requirements shall be included in and made a part of this Section.
- B. Examine all Drawings and all other Sections of the Specifications for requirements therein affecting the work of this trade.

1.02 SCOPE OF WORK

- A. Perform site preparation work as shown and specified. The work includes:
 - 1. Removing trees and other vegetation.
 - 2. Stripping lawn areas.
 - 3. Stripping and stockpiling topsoil.
 - 4. Removing designated site improvements.
 - 5. Construction Fence.
 - 6. Erosion control barrier.

1.03 QUALITY ASSURANCE

- A. Comply with Section 02000 requirements.

1.04 PROJECT CONDITIONS

- A. Perform site preparation work before commencing site construction.
- B. Locate, protect, and maintain active utilities and site improvements to remain.
- C. Provide necessary barricades, coverings, and protection to prevent damage to existing improvements indicated to remain.
- D. Restore to original grades and conditions, areas adjacent to site disturbed or damaged as a result of site preparation work.

1.05 SUBMITTALS

- A. Submit written description of construction fencing plan. Include methods that will be used to ensure safety and enclosure of the site when working in any public way.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Construction Fence: 6' high chain link fence, with knuckled selvages. Used fencing is acceptable provided that it is free from torn or exposed fabric and wire ends or other dangerous conditions. Maximum 10' o.c. post spacing. Existing perimeter fencing may form part of the construction fence.
- B. Tree protection fence: 4' Orange plastic construction fence, with 2x2 wood or metal 'C' section posts, 6' o.c., or as noted on drawings.
- C. Erosion Control Barrier: Biodegradable Erosion Control Logs, minimum 8" diameter, as manufactured by Green Solutions, American Excelsior, EcoDepot, or approved equal.
- C. Other Materials and equipment: As selected by the Contractor, except as indicated.

PART 3 EXECUTION

3.01 CONSTRUCTION FENCE

- A. Install a fence to completely enclose and secure portions of the site that are under construction. Maintain fence in place for the duration of construction, until acceptance of the project. Any and all gates shall be locked. Provide combination or multiple keys to Owner's representative. Fence shall remain in place until completion of grow-in period. Contractor shall return to the site and remove the fence when directed by the City. Contractor shall repair any holes or damage caused by the removal of the fence in accordance with the specifications.
- B. Erect temporary fencing before commencing site preparation work. Maintain fencing until completion of grow-in period.
- C. During construction and until substantial completion of the Project the Contractor shall be responsible for securing the site within the contract limit line as shown on the Drawings. Open excavation, installation of equipment not completed or any other condition unsafe for children or adults shall be corrected at the completion of each day's work and the site shall be secured after each day's work.
- D. Work adjacent to Wellington Street and Spy Pond Lane or affecting traffic on Wellington Street and Spy Pond Lane must be fully coordinated with the Town of Arlington DPW, Traffic and Police Departments. Maintain traffic routes as required.

3.02 EROSION CONTROL AND TREE PROTECTION

- A. Locate and suitably identify trees and improvements indicated to remain.
- B. Install erosion control barrier and tree protection fencing prior to beginning any other site operations, other than construction fencing.
- C. Install erosion control barrier in accordance with details and manufacturer's recommendations.
- D. Install tree protection as noted on drawings.

3.03 STRIPPING TOPSOIL

- A. Strip topsoil to its full depth at building areas, and all areas to be regraded, resurfaced, or paved within contract limit work area.
- B. Stockpile topsoil in a location acceptable to the Landscape Architect, for use in finish grading and preparation of lawns and planting beds.
 - 1. Stockpiled topsoil shall be free from trash, brush, stones over 1/2" diameter, and other extraneous matter.
 - 2. Grade and slope stockpiles for proper drainage and to prevent erosion.
 - 3. Excess topsoil remaining after completion of site operations shall become the property of the contractor and be removed from site. Repair topsoil stockpile area in accordance with specifications.
- C. Protect all areas which are not to be resurfaced or regraded, and adjacent areas outside of the contract limits from damage due to site preparation work.

3.04 SITE IMPROVEMENTS

- A. Remove existing site improvements within contract limits as indicated on the drawings.
- B. Existing Utilities:
 - 1. Information on the drawings relating to existing utility lines and services is from the best sources presently available. All such information is furnished only for information and is not guaranteed. Excavate test pits as required to determine exact locations of existing utilities.
 - 2. Perform work and provide necessary materials to disconnect or relocate existing utilities as indicated. Record existing utility termination points before disconnecting.
 - 3. Fill abandoned piping with an 8" thick concrete plug or mortar jointed masonry bulkhead.
- C. Remove existing sidewalks, curbs, and paving, including all base material, as required to accommodate new construction. Cut existing sidewalks, curbs, and paving in neat, straight lines to provide uniform, even transition from new to adjacent existing work. Cut back existing paving a sufficient distance to permit forming and installation of new work.

- D. Raise existing catch basin, inlet and manhole structures to accommodate new grade elevations at paved and lawn areas where indicated. Extend structures as required. Re-use existing catch basin, inlet and manhole frames, and covers.

3.05 DISPOSAL OF WASTE MATERIALS

- A. Stockpile, haul from site, and legally dispose of waste materials and debris. Accumulation is not permitted.
- B. Maintain disposal routes clear, clean, and free of debris.
- C. On-site burning of combustible cleared materials is not permitted.

3.06 CLEANING

- A. Upon completion of site preparation work, clean areas within contract limits, remove tools, and equipment. Provide site clear, clean, and free of materials and debris and suitable for site work operations.

3.07 SALVAGED MATERIALS

- A. Materials, items, and equipment not scheduled for reinstallation or salvaged for the Owner's use are the property of the Contractor. Remove cleared materials from the site as the work progresses. Storage and sale of Contractor's salvage items on site is not permitted.

END OF SECTION

SECTION 02200

EARTHWORK

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. The General Documents, as listed in the Table of Contents, and applicable parts of Division 1, General Requirements shall be included in and made a part of this Section.
- B. Examine all Drawings and all other Sections of the Specifications for requirements therein affecting the work of this trade.
- C. See also soils report following this section.

1.02 DESCRIPTION

- A. Perform earthwork as shown and specified. The work includes:
 - 1. Site grading and filling to indicated elevations, profiles and contours.
 - 2. Excavating and backfilling structure footings and foundations.
 - 3. Subgrade preparation for curbs, walks and paving.
 - 4. Topsoil distribution and finish grading.

1.03 QUALITY ASSURANCE

- A. Comply with requirements of 02000 and 02210, as well as other sections as applicable.
- B. Testing and inspection: Performed by a qualified independent testing laboratory, under the supervision of a registered professional engineer, specializing in soils engineering.
- C. Provide and pay for testing and inspection during earthwork operations. Laboratory, inspection service, and Soils Engineer shall be acceptable to the Landscape Architect.
- D. Materials and methods of construction shall comply with the following standards:
 - 1. Massachusetts Department of Public Works, Standard Specifications for Highways and Bridges, most recent edition, (Standard Specifications).
 - 2. American Society for Testing and Materials, (ASTM).
 - 3. American Association of State Highway and Transportation Officials, (AASHTO).
 - 4. National Fire Protection Association, (NFPA).

5. Town of Arlington, MA DPW Standards.

1.04 SUBMITTALS

- A. Submit reports for testing and inspection of the following:
 1. Fill and backfill materials.
 2. Compaction of subgrade and base materials.

1.05 PROJECT CONDITIONS

- A. Known underground and surface utility lines are indicated on the drawing.
- B. Protect existing features designated to remain as part of the landscaping work.
- C. Protect excavations by shoring, bracing, sheeting, underpinning, or other methods, as required to prevent cave-ins or loose dirt from entering excavations. Barricade open excavations and post warning lights at work adjacent to public streets and walks.
- D. Underpin adjacent structure(s), including utility service lines, which may be damaged by excavation operations.
- E. Promptly repair damage to adjacent facilities caused by earthwork operations. Cost of repair at Contractor's expense.
- F. Promptly notify the Landscape Architect of unexpected sub-surface conditions.
- G. Protect bottoms of excavations and soil beneath and around foundation from frost and freezing.
- H. Grade at excavations to prevent surface water draining into excavated areas.

PART 2 PRODUCTS

2.01 MATERIALS

- A. All fill material is subject to testing and inspection.
- B. Fill materials: Inert soil material free of organic matter, rubbish, debris, and rocks greater than 6" diameter and meeting the following requirements.
 1. Plastic index of not more than 30 - ASTM D424.
 2. Minimum laboratory dry weight at optimum moisture content of 110 pounds per cu. ft.
 3. Provide imported fill material as required to complete the work. Obtain rights and pay all cost for imported materials.

4. Proposed fill material shall be inspected prior to use in the work.
 5. Suitable excavated materials removed to accommodate new construction may be used as fill material subject to Engineer's inspection and approval. See soil report.
- C. Granular base: MA-DPW Standard Specifications for Reclaimed Pavement Base Course, M1.11.0.
- D. Granular fill: AASHTO M43, #6 (3/8" to 3/4") clean uniformly graded stone or gravel.
- E. Topsoil: Natural, friable, fertile soil characteristic of productive soil in the vicinity, reasonably free of stones, clay lumps, roots, and other foreign matter, USDA classification Loamy Sand or Sandy Loam, screened to 1/2" maximum particle size.
1. On-site topsoil may be used provided it meets or may be modified to meet the above requirements. Provide additional imported topsoil material as required to complete the work, as needed. Obtain rights and pay all costs for imported materials.
 2. Provide topsoil test reports, including suitability for intended use and recommendation for supplements, fertilizers, etc. Cost for all supplements and fertilizers to be included in base bid.
- F. Other materials required for proper completion of work: As selected by Contractor and acceptable to Landscape Architect.

PART 3 EXECUTION

3.01 PREPARATION

- A. Establish extent of grading and excavation by area and elevation. Designate and identify datum elevation and project engineering reference points. Set required lines, levels, and elevations.
- B. Do not cover or enclose work of this Section before obtaining required inspections, tests, approvals, and location recording.

3.02 EXISTING UTILITIES

- A. Before starting grading and excavation, establish the location and extent of underground utilities in the work area. Exercise care to protect existing utilities during earthwork operations. Perform excavation work near utilities by hand and provide necessary shoring, sheeting, and supports as the work progresses.
- B. Maintain, protect, relocate, or extend as required existing utility lines to remain which pass through the work area. Pay costs for this work, except as covered by the applicable utility companies.
- C. Protect active utility services uncovered by excavation.
- D. Remove abandoned utility service lines from areas of excavation. Cap, plug, or seal abandoned lines and identify termination points at grade level with markers.

- E. Accurately locate and record abandoned and active utility lines rerouted or extended on project record documents.

3.03 SITE GRADING

- A. Perform grading within contract limits, including adjacent transition areas, to new elevations, levels, profiles, and contours indicated. Provide subgrade surfaces parallel to finished surface grades. Provide uniform levels and slopes between new elevations and existing grades.
- B. Grade surfaces to assure areas drain away from structures and to prevent ponding and pockets of surface drainage. Provide subgrade surfaces free from irregular surface changes and as follows:
 - 1. Rough grading: Plus or minus 0.10 ft. subgrade tolerance. Finish required will be that ordinarily obtained from either blade-grader or scraper operations.
 - 2. Provide subgrade surface free of exposed boulders or stones exceeding 3" in greatest dimension in paved areas; 2" lawn and planting areas.
 - 3. Lawn and planting areas: Allow for 4" average depth of topsoil at lawn areas, and 12" depth at planting areas, except as otherwise indicated on the drawings.
 - 4. Paved areas: Shape surface of subgrade areas to line, grade, and cross-section indicated. Provide compacted subgrade suitable to receive paving base materials. Subgrade tolerance plus or minus 1/2".
 - 5. Granular base: Grade subgrade surface smooth and even, free of voids to the required subgrade elevation. Provide compacted subgrade suitable to receive granular base materials. Tolerance 1/2" in 10'-0".

3.04 EXCAVATING

- A. Excavate for structures to elevations and dimensions shown. Extend excavation a sufficient distance from foundations to permit placing and removal of formwork, installation of materials, services, and inspection. Hand trim foundation excavations to final grade just before concrete is placed. Remove loose, soft materials, and all organic matter. Footings shall bear on approved undisturbed bearing soil.
- B. Obtain inspection and testing of foundation excavations by Engineer before concrete is placed.
- C. Excavate for curbs, walks, and paving to cross-sections, elevations, and grades indicated. Allow for base material.
- D. Earth excavation shall include the satisfactory removal and disposal of all materials encountered, regardless of the nature of the materials, the condition of the materials at the time they are excavated, or the manner in which they were excavated, except materials classified as rock excavation.
- E. Extra excavation: Excavate unsatisfactory soil materials extending below required elevations to depth as directed. Such extra excavation will be paid for as a change in work. Obtain Landscape Architect's written authorization before performing extra excavation work.

- F. Unauthorized excavation: Backfill and fill all overexcavation to proper grades. Fill overexcavation at footings with 3,000 psi concrete. Additional labor and material for unauthorized excavation and remedial work at Contractor's expense.
- G. Shore, sheet, or brace excavations as required to maintain them secure. Remove shoring and bracing as backfilling progresses, when banks are safe against caving.
- H. Do not excavate footings or slabs to the full depth when freezing temperature may be expected, unless footings or slabs are placed immediately after the excavation has been completed. Protect excavation bottoms from freezing when the placing of concrete is delayed.
- J. Rock excavating:
 - 1. Rock: Material which cannot be removed with 3/4 cu. yd. capacity power shovel without drilling or blasting or solid boulders with a volume of more than 1/2 cu. yd.
 - 2. Rock excavation: Material excavation of buried boulders and rock in excess of 1/2 cu. yd. that require continuous and systematic drilling and blasting or continuous use of ripper or other special equipment. All other excavation shall be classified as earth excavation.
 - 3. Contractor will be paid cost of rock excavation as a change in work. Obtain Landscape Architect's written authorization prior to performing rock excavation work.
 - 4. The use of explosives is not permitted.

3.05 SITE DRAINAGE AND UTILITIES EXCAVATING AND BACKFILLING

- A. Performed under Section 02730: Site Drainage.

3.06 DRAINAGE

- A. Provide necessary pumps and drainage lines and maintain excavations, including footings and pits, free from water, ice and snow during excavating and subsequent work operations.
- B. Provide drainage of the working area at all times.

3.07 FILLING, BACKFILLING, AND COMPACTING

- A. Obtain inspection and approval of subgrade surfaces by Engineer prior to filling operations. Scarify, dry, and compact soft and wet areas; remove and replace unsuitable subgrade materials with an approved compacted fill material. Take corrective measures before placing fill materials.
 - 1. Topsoil not permitted as fill or backfill material within structure or under paved areas.
- B. Soil stabilization: When exposed subgrade surfaces become spongy during construction operations and soil stabilization is required, stabilize subgrade materials as directed by the Soils Engineer. Soil stabilization will be paid for as a change in work. Obtain Landscape Architect's written authorization before performing soil stabilization work.

- C. Proof-roll all subgrade surfaces prior to placing fill or base materials. Proof-rolling shall consist of at least 4-5 passes with a vibratory compactor (minimum 750 pound static weight) operating at peak energy.
- D. Spread approved fill material uniformly in layers not greater than 8" of loose thickness over entire fill area.
 - 1. Lift thickness requirements may be modified by Soil Engineer to suit equipment and materials or other conditions when required to assure satisfactory compaction.
 - 2. Moisture-condition fill material by aerating or watering and thoroughly mix material to obtain moisture content permitting proper compaction.
 - 3. Place and compact each layer of fill to indicated density before placing additional fill material. Repeat filling until proposed grade, profile, or contour is attained.
 - 4. Suspend fill operations when satisfactory results cannot be obtained because of environmental or other unsatisfactory site conditions. Do not use muddy or frozen subgrade surface. Do not place fill material on muddy or frozen subgrade surface.
 - 5. Maintain surface conditions which permit adequate drainage of rain water and prevent ponding of surface water in pockets. When fill placement is interrupted by rain, remove wet surface materials or permit to dry before placing additional fill material.
- E. Place backfill materials in uniform layers not greater than 8" loose thickness over entire backfill area.
 - 1. Use hand tampers or vibrating compactors at foundation walls, retaining walls, and similar locations. Do not use large rolling equipment adjacent to foundation walls and retaining walls.
 - 2. Do not backfill against foundation walls or retaining walls until walls for bearing surfaces have reached design strength or are properly braced, and backfilling operations approved. Provide clean backfill materials, except where granular materials are indicated. Compact in maximum 8" layers.
- F. Fill all areas of settlement to proper grade before subsequent construction operations are performed.
- G. Compaction:
 - 1. Compact top 12" of subgrade and each layer of fill or backfill material at foundations, slabs-on-grade retaining walls, and paved areas to 95% relative compaction at optimum moisture content in accordance with ASTM D1557 Modified Proctor Test. Extend compaction at least 1'-0" beyond paving.
 - 2. Compact top 6" of subgrade and each layer of fill material at lawns and unpaved areas to 90% of maximum dry density at optimum moisture content in accordance with ASTM D698 Standard Proctor Method.

3. Water settling, puddling, and jetting of fill and backfill materials as a compaction method are not acceptable.
 4. Maintain moisture content of materials, during compaction operations within required moisture range to obtain indicated compaction density.
 5. Provide adequate equipment to achieve consistent compaction of backfill materials.
- H. Provide depths as shown of granular base under footings, concrete, paving and walks.

3.08 FINISH GRADING

- A. Uniformly distribute and spread stockpiled topsoil. Provide 4" average depth at lawn areas, 12" at planting areas. Provide additional imported topsoil as required to complete the work. Use loose, dry topsoil. Do not use frozen or muddy topsoil. Place during dry weather.
- B. Fine grade topsoil eliminating rough and low areas to ensure positive drainage. Maintain levels, profiles, and contours of subgrades.
- C. Remove stones, roots, weeds, and debris while spreading topsoil materials. Rake surface clean of stones 1/2" or larger in any dimension and all debris. Provide surfaces suitable for soil preparation provided under lawn and planting work.
- D. Maintenance:
 1. Protect finish graded areas from traffic and erosion. Keep free of trash and debris. Repair and reestablish grades in settled, eroded, and damaged areas.
 2. Where completed areas are disturbed by construction operations or adverse weather, scarify, re-shape, and compact to required density.

3.09 FIELD QUALITY CONTROL

- A. Provide field quality control, soils testing and inspection during earthwork operations, as noted below and in Section 02210.
- B. Contractor shall provide adequate notice, cooperate with, provide access to the work, obtain samples, and assist testing agency and their representatives in execution of their function.
- C. Fill materials: Test proposed materials to verify suitability for use, gradation of material, moisture-density relation by ASTM D698 Standard Proctor Method, design bearing value, and percent of organic materials.
- D. Subgrade surfaces: Based on visual examination at the site, provide bearing tests as required to verify subgrade surfaces are adequate and meet or exceed design bearing values. Structure slabs and paved areas: Make at least 1 test for each 2,000 sq. ft. of slab or paved area.
- E. Compaction operations: Provide periodic inspection and testing during site area filling and compaction operations. Structure slabs and paved areas: Make at least 1 test for each 2,000 sq. ft.

of slab or paved area.

- F. Foundation excavations: Provide bearing tests as required to verify bearing surfaces are adequate and meet or exceed design bearing values. Make at least 2 tests at locations directed by the Engineer.
- G. When, during progress of work, field tests indicate that installed compacted materials do not meet specified requirements, provide additional compaction until specified density is achieved, or remove and replace defective materials with new materials as directed by the Landscape Architect. Cost of additional labor, materials, and testing to attain specified density at Contractor's expense.

3.10 DISPOSAL OF WASTE MATERIALS

- A. Stockpile, haul from site, and legally dispose of waste materials, including excess excavated materials, rock, trash, and debris.
- B. Maintain disposal route clear, clean, and free of debris.

3.11 CLEANING

- A. Upon completion of earthwork operations, clean areas within contract limits, remove tools, and equipment. Provide site clear, clean, free of debris, and suitable for site work operation.

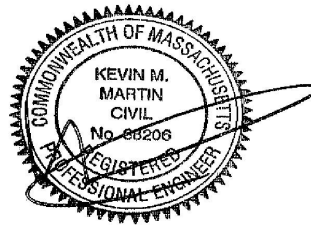
END OF SECTION

KEVIN M. MARTIN, P.E.
KMM GEOTECHNICAL CONSULTANTS, LLC
7 Marshall Road
Hampstead, NH 03841
603-489-5556 (p)/ 603-489-5558 (f)/781-718-4084(m)
kevinmartinpe@aol.com

MEMORANDUM

TO: Andrew Leonard
Leonard Design Associates
95 Ronald Road
Arlington, MA 02474

FROM: Kevin M. Martin, P.E.
Geotechnical Engineer



DATE: July 29, 2014

**RE: GEOTECHNICAL REVIEW
SPY POND TENNIS COURTS
ARLINGTON, MASSACHUSETTS**

This memorandum serves as a geotechnical review for the proposed project. The contents of this review are subject to the attached *Limitations*.

BACKGROUND

The project is understood to include rehabilitation of the existing tennis courts. The courts (pavement) appear in moderate condition but with occasional cracking. Full depth reclamation is proposed for the pavements with a new pavement structure. Expansion of the tennis courts is also being considered for the project. The purpose of this study is to provide a geotechnical evaluation related to the new tennis courts.

SUBGRADE CONDITIONS

The subgrade was reviewed with the excavation of three (3) test pits. The *Test Pit Locations & Test Pit Summary* are attached for review.

The subgrade conditions below the Topsoil include Granular Outwash. These soils include a brown, fine to coarse Sand & Gravel, trace silt, cobbles. These soils are clean, granular, well-draining and stable. The Outwash was not penetrated to 8 ft.

The tennis court pavement measured $\approx 3\frac{1}{2}$ inches in thickness. Some shallow Granular Fill was encountered below the pavement in TP3 to about ≈ 12 inches in thickness. The Fill was similar in composition to the Outwash but without cobbles. Gradation testing indicates a clean, fine to coarse Sand & Gravel, trace silt. The test results are attached.

Groundwater was not encountered in the pits. Mottles (re-dox staining) were present about ≈ 5 ft below grade at TP2.

GEOTECHNICAL EVALUATION

The subgrade conditions are suitable for support of a new pavement structure. The existing pavement and gravel base course are to be fully reclaimed as the new pavement base. The reclaimed pavement shall conform to the *MA-DPW Standard Specifications for Reclaimed Pavement Base Course (M1.11.0)*. The gravel base shall be compacted to at least 95% relative compaction per the Modified Proctor Test (ASTM D1557). The pavement subgrade should consist of the Granular Outwash. These conditions should provide both strength and drainage for the lightly loaded pavement. In the expanded tennis courts, a minimum 12 inch base of *MA-DPW Gravel Borrow* shall be placed for support. It is recommended that all subgrades be proof-rolled with vibratory compaction. The purpose of the proof-rolling is to densify the subgrade and identify potential weak and/or unstable areas that should require further excavation. Proof-rolling should involve at least 4-5 passes with a vibratory compactor (minimum 750 pound static weight) operating at peak energy. The subgrade should ultimately be stable, dewatered, compact and protected from frost throughout construction. Bearing subgrades that become weakened or disturbed due to wet conditions or other cause shall be rendered unsuitable for structural support. An Engineer should be scheduled to review the subgrade conditions and preparation during construction.

We trust the contents of this memorandum report are responsive to your needs at this time. Should you have any questions or require additional assistance, please do not hesitate to contact our office.

LIMITATIONS

Explorations

1. The analyses, recommendations and designs submitted in this report are based in part upon the data obtained from preliminary subsurface explorations. The nature and extent of variations between these explorations may not become evident until construction. If variations then appear evident, it will be necessary to re-evaluate the recommendations of this report.
2. The generalized soil profile described in the text is intended to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized and have been developed by interpretation of widely spaced explorations and samples; actual soil transitions are probably more gradual. For specific information, refer to the individual test pit and/or boring logs.
3. Water level readings have been made in the test pits and/or test borings under conditions stated on the logs. These data have been reviewed and interpretations have been made in the text of this report. However, it must be noted that fluctuations in the level of the groundwater may occur due to variations in rainfall, temperature, and other factors differing from the time the measurements were made.

Review

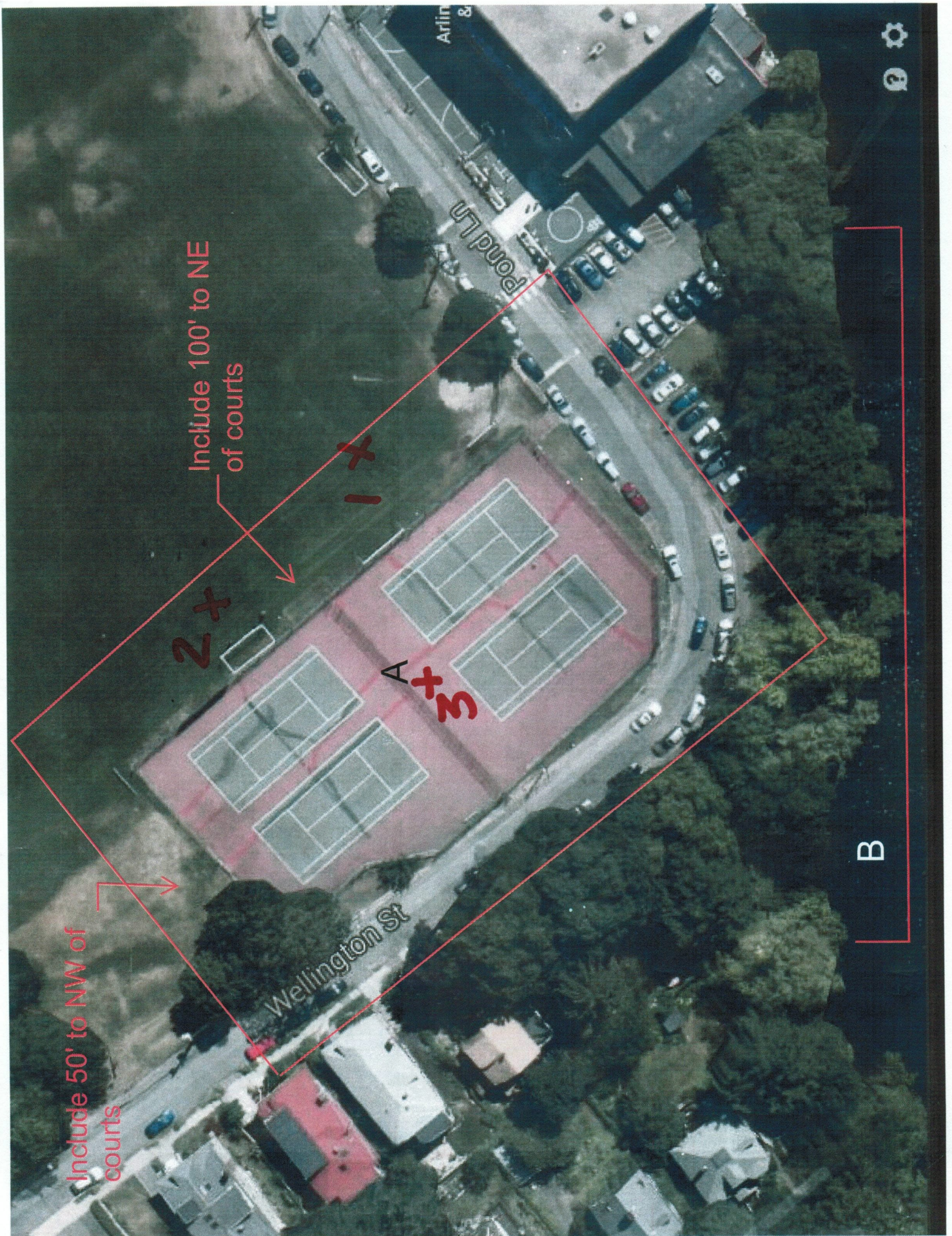
4. It is recommended that this firm be given the opportunity to review final design drawings and specifications to evaluate the appropriate implementation of the recommendations provided herein.
5. In the event that any changes in the nature, design, or location of the proposed areas are planned, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and conclusions of the report modified or verified in writing by KMM Geotechnical Consultants, LLC.

Construction

6. It is recommended that this firm be retained to provide geotechnical engineering services during the earthwork phases of the work. This is to observe compliance with the design concepts, specifications, and recommendations and to allow design changes in the event that subsurface conditions differ from those anticipated prior to the start of construction.

Use of Report

7. This report has been prepared for the exclusive use of Leonard Design Associates in accordance with generally accepted soil and foundation engineering practices. No other warranty, expressed or implied, is made.
8. This report has been prepared for this project by KMM Geotechnical Consultants, LLC. This report was completed for preliminary design purposes and may be limited in its scope to complete an accurate bid. Contractors wishing a copy of the report may secure it with the understanding that its scope is limited to preliminary geotechnical design considerations only.



TP3

4" BIT. PVT

SAND + GRAVEL
(FILL)

(OUTWASH)

TP2

TOPSOIL (9")

BROWN
F.C. SAND
1/2 GRAVEL
TRACE SILT
Cobbles
(OUTWASH)

TP1

TOPSOIL (12")

BROWN
F.C. SAND
1/2 GRAVEL
TRACE SILT
Cobbles
(OUTWASH)

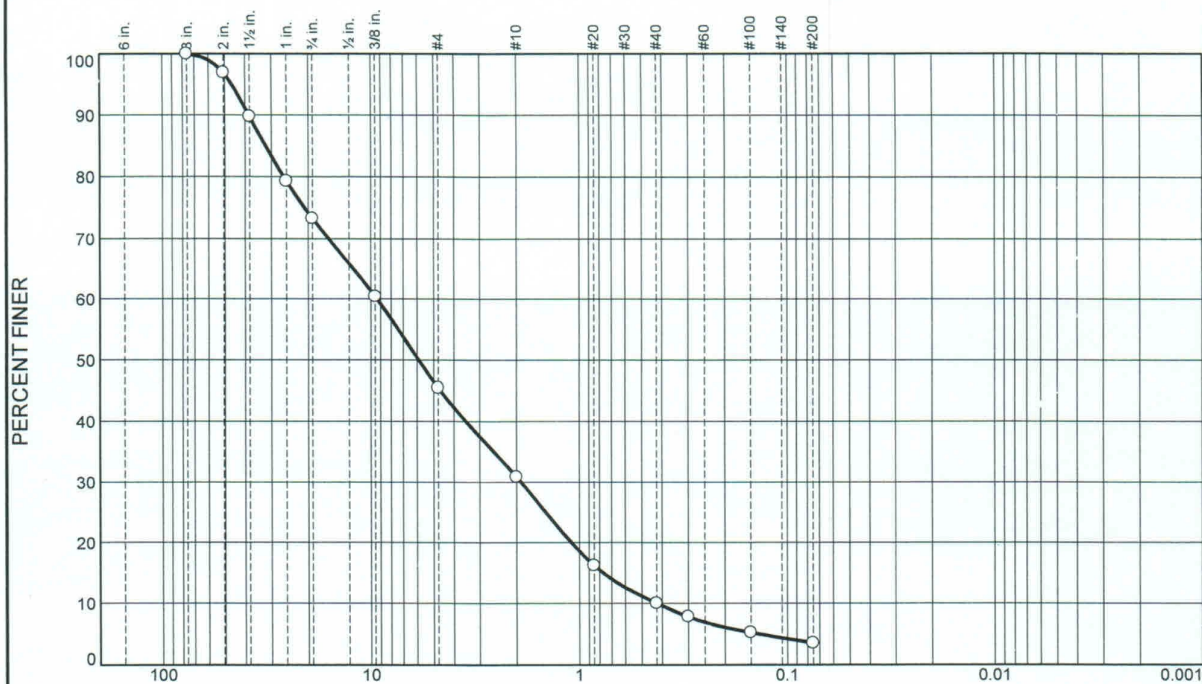
DEPTH (FT)

0 2 4 6 8 10

TEST PIT SUMMARY

SPY POND TENNIS COURTS
ARLINGTON, MASS

Particle Size Distribution Report



% < 3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	26.7	27.8	14.7	20.8	6.5	3.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3"	100.0		
2"	96.9		
1.5"	89.8		
1"	79.3		
3/4"	73.3		
3/8"	60.4		
#4	45.5		
#10	30.8		
#20	16.2		
#40	10.0		
#50	7.8		
#100	5.2		
#200	3.5		

* (no specification provided)

Material Description

F-C GRAVEL, AND SAND, TRACE SILT

Atterberg Limits
 LL= NV PI= NP
Coefficients
 D₉₀= 38.4026 D₈₅= 31.9833 D₆₀= 9.3315
 D₅₀= 5.8986 D₃₀= 1.9066 D₁₅= 0.7699
 D₁₀= 0.4239 C_u= 22.02 C_c= 0.92

Classification
 USCS= GP AASHTO= A-1-a

Remarks

Source of Sample: TEST PIT 3, BELOW TENNIS COURT
 Sample Number: 1

Date: 7/29/2014

KMM GEOTECH

Client:
 Project: SPY POND, ARLINGTON, MA

Project No:

Figure

02200-a6

SECTION 02510

BITUMINOUS CONCRETE PAVING

PART I GENERAL

1.01 RELATED DOCUMENTS

- A. The General Documents, as listed in the Table of Contents, and applicable parts of Division 1, General Requirements shall be included in and made a part of this Section.
- B. Examine all Drawings and all other Sections of the Specifications for requirements therein affecting the work of this trade.

1.02 DESCRIPTION

- A. Provide bituminous concrete paving as shown and specified. The work includes:
 - 1. Walkway paving.
 - 2. Tennis court paving
 - 3. Granular base for paving.

1.03 QUALITY ASSURANCE

- A. Comply with Section 02000 requirements.
- B. Testing and inspection: Performed by a qualified independent testing laboratory.
- C. Materials and methods of construction shall comply with the following standards:
 - 1. Massachusetts Department of Public Works, Standard Specifications for Highways and Bridges (Standard Specifications).
 - 2. American Society for Testing and Materials, (ASTM).
 - 3. American Association of State Highway and Transportation Officials, latest edition, (AASHTO).
 - 4. Town of Arlington, MA DPW Standards.
- D. Installation: Performed only by skilled workmen with satisfactory record of performance on completed projects of comparable size and quality.
- E. The minimum pitch on all paved surfaces shall be 1% or 1/8" per foot pitch unless indicated as less on the Drawings. Confirm with the Landscape Architect any pitch of less than 1%.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Deliver all materials in manufacturer's unopened and undamaged containers with labels intact and legible. Store off the ground and protect from weather damage and deterioration.
- B. Store loose granular materials in a well drained area on a solid surface to prevent mixing with foreign materials.

1.05 PROJECT CONDITIONS

- A. Work notification: Notify Landscape Architect at least 24 hours prior to beginning any phase of paving work.
- B. Establish and maintain required levels and grade elevations. Review installation procedures and coordinate paving work with other work affected by the paving work.
- D. Do not install paving over wet, saturated, muddy, or frozen subgrade.
- E. Do not install paving when air temperature is below 40 degrees F.
- F. Provide temporary barricades and warning lights as required for protection of project work and public safety.
- G. Protect adjacent work from damage, soiling, and staining during paving operations.

PART II PRODUCTS

2.01 GRANULAR BASE FOR PAVING

- A. Granular Base: MA-DPW Standard Specifications for Reclaimed Pavement Base Course, M1.11.0.

2.02 BITUMINOUS CONCRETE PAVEMENTS

- A. Drive and Walkway Pavement: Provide bituminous concrete paving in accordance with Mass. DPW Standard Specifications M3.11.00, and as drawn and detailed.
 - 1. Base Course: Class I Bit. Conc. M3.11.03 'Base Course'
 - 2. Wearing Course: Class I Bit. Conc. Pavement, M3.11.03 'Dense Mix'
 - 3. Tack Coat: Meeting 460.62 of MA DPW Specifications
- B. Tennis Court Pavement: Provide bituminous concrete paving in accordance with Mass. DPW Standard Specifications, and as drawn and detailed.
 - 1. Leveling Course: Class I Bit. Conc. Pavement, M3.11.03 'Top Course'. Tolerance: maximum 1/4" in 10' variance from true specified plane in any direction.
 - 2. Surface Course: Class I Bit. Conc. Pavement, M3.11.03 'Surface Treatment'. Tolerance:

maximum 1/8" in 10' variance from true specified plane in any direction.

- a. Liquid Asphalt Bitumen: Minimum 5.5% by weight.
 - b. Aggregate Type: Crushed stone, gravel, shale, limestone, etc. Foreign materials, i.e., pyrite, clay, ferrous compounds, dirt and organic material are not acceptable.
 - c. Cure Time: Minimum 14 days before application of playing surface.
 - d. Voids Content: Minimum as specified by the Department of Transportation or State Highways Department, but in no case should void content exceed 7%.
3. Tack Coat: Meeting 460.62 of the MA DPW Specifications.
- C. Equipment:
1. Paving equipment: Spreading, self-propelled asphalt paving machines capable of maintaining line, grade, and thickness shown.
 2. Compacting equipment: Self-propelled rollers, minimum 10 ton weight.
 3. Hand tools: Rakes, shovels, tampers, and other miscellaneous equipment required to complete the work.

PART III EXECUTION

3.01 INSPECTION

- A. Examine subgrades and installation conditions. Do not start bituminous concrete paving work until unsatisfactory conditions are corrected.

3.02 PREPARATION

- A. Proof roll the subgrade and do all necessary rolling and compacting to obtain firm, even subgrade surface. Fill and consolidate depressed areas. Remove non-compactable materials, replace with clean fill, and compact as specified in Earthwork section.
- B. Frame adjustments:
1. Verify frames for manholes, catch basins, spray features, and other such units, within areas to be paved, are at their proper elevation.
 2. Adjust frames as required to match paving. Provide temporary closures over openings until completion of rolling operations. Remove closures at completion of the work. Set covers to grade, flush with the surface of adjoining pavement surface.
- C. Coordinate junction of new and existing pavement. Saw cut existing pavement to provide a uniform straight line transition. Meet existing surface levels and maintain drainage slopes. Feathering of transitions is not acceptable. Apply tack coat to contact surfaces of existing pavement, curbs, and

structures abutting pavement.

3.03 INSTALLATION - BITUMINOUS CONCRETE PAVING

- A. Base Materials: Install aggregate base materials in maximum lifts of 6", total compacted depth as scheduled.
- B. Compact aggregate base materials as specified in earthwork section until a uniformly-smooth, hard surface, complying with the lines, grades, elevations, and cross-sections shown has been established.
- C. Paving in all areas requiring bituminous concrete paving shall be laid in two (2) courses. The thickness of each course shall be as shown on the Drawings and measured in place after rolling. Apply tack coat between the base course/wearing course and leveling course/surface course.
- D. All installation of bituminous concrete paving to be in accordance with Section 460, Class I Bituminous Concrete Pavements, of the Standard Specifications.
- E. Check for correct elevation and position of any footings and/or similar structures located within the areas to be paved and make, or have made any necessary adjustments in such structures to bring them to the correct grade shown on the Drawings.
- F. Install bituminous joint sealer at all areas where new bituminous concrete pavement abuts existing pavement.

3.04 PROTECTION

- A. Restrict traffic from all paving surfaces during installation and for at least 24 hours after installation.
- B. Protect paving work from damage due to construction and vehicular traffic until final acceptance.

3.05 CLEANING

- A. Perform cleaning during installation of the work and upon completion of the work. Remove from site all excess materials, debris, and equipment. Repair damage resulting from paving operations.
- B. Sweep sidewalks and pavement, wash free of stains, discoloration, dirt, and other foreign material immediately prior to final acceptance.

END OF SECTION

SECTION 02580

PAVEMENT MARKING

PART 1 GENERAL

1.01 DESCRIPTION

- A. Provide pavement marking system as shown and specified. The work includes:
 - 1. Preparation of bituminous concrete surface.
 - 2. Application of pavement marking system.

1.02 QUALITY ASSURANCE

- A. Comply with Section 02000 requirements.
- B. Materials and methods of construction shall comply with the following standards:
 - 1. American Society for Testing and Materials, (ASTM).
 - 2. U.S. Tennis Court and Track Builders Assoc.
- C. Contractor's Qualifications: Installation of Pavement coating and marking system shall be by a contractor with a minimum of five year's experience in the application of pavement coating systems and a demonstrated track record with the specific system specified.

1.03 SUBMITTALS

- A. Product data:
 - 1. Submit complete materials list of items proposed for the work. Identify materials source.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Deliver manufactured products in manufacturer's original, unopened, and undamaged containers with labels intact and legible.
- B. Store and handle manufactured products to prevent damage and deterioration.

1.05 PROJECT CONDITIONS

- A. Weather limitations:
 - 1. Do not install base course materials over wet or frozen subgrade surfaces.

2. Do not apply materials when temperature is 50 degrees F. or below. Do not apply to wet base surface.
- B. Protect adjacent work from damage, soiling, and staining during paving operations.

PART 2 PRODUCTS

2.01 MATERIALS

- A: Pavement marking system shall be Plexipave, by California Products, Cambridge, MA, 800-842-1161 or Novacrylic, by Nova Sports, USA, local representative Acme Maintenance Supply, Wakefield, MA, 617-245-6379, or approved equal. System application shall consist of:
 1. Primer Coat: Ti-Coat w/ Concrete Preparer (California Products) or Novabond (Nova Sports).
 2. Pigmented Top Coat: Plexichrome (California Products) or Novacoat (Nova Sports)
 3. Colors to be selected by the Landscape Architect from the Manufacturer's standard color ranges. Interior court color (A), including doubles alleys: US Open Blue or equivalent. Outside court color (B): Green.

PART 3 EXECUTION

3.01 INSPECTION

- A. Examine subgrades and installation conditions. Do not start pavement coating and marking work until unsatisfactory conditions are corrected.

3.02 PREPARATION

- A. Follow manufacture's recommendations for cleaning of concrete surfaces prior to application of primer coat.

3.03 PAVEMENT COATING AND MARKING

- A. Follow manufacturer's recommendations for the application of primer and pigmented top coat systems.
- B. Provide patterns and colors shown. Recoat areas where pattern or evenness of lines is unacceptable to Landscape Architect.

3.09 PROTECTION

- A. Protect newly applied coatings from damage to due to construction until manufacturer's

recommended curing period is finished.

3.10 CLEANING

- A. Perform cleaning during installation of the work and upon completion of the work. Remove from site all excess materials, debris, and equipment. Repair damage resulting from coating operations.
- B. Sweep pavement and wash free of stains, discolorations, dirt, and other foreign material immediately prior to final acceptance.

END OF SECTION

SECTION 02730

SITE DRAINAGE

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. The General Documents, as listed in the Table of Contents, and applicable parts of Division 1, General Requirements shall be included in and made a part of this Section.
- B. Examine all Drawings and all other Sections of the Specifications for requirements therein affecting the work of this trade.

1.02 SCOPE OF WORK

- A. Provide site drainage as shown and specified. The work includes:
 - 1. Drainage and utility structures.
 - 2. Frames, grates and covers for structures.
 - 3. Interceptor Trench Drains.
 - 4. Storm and sub-drainage pipe.
 - 5. Drainage fill.

1.03 QUALITY ASSURANCE

- A. Comply with Section 02000 requirements.
- B. Materials and methods of construction shall comply with the following standards:
 - 1. Massachusetts Department of Public Works, Standard Specifications for Highways and Bridges, most recent edition (Standard Specifications).
 - 2. American Society for Testing and Materials, (ASTM).
 - 3. American Association of State Highway and Transportation Officials, (AASHTO).
 - 4. American National Standards Institute (ANSI).
 - 5. Town of Arlington, MA DPW standards.
- C. Excavating, backfilling, and compacting operations: Comply with Section 02200 requirements and as specified.

- D. Obtain Owner's acceptance of installed and tested storm drainage prior to installing backfill materials.

1.04 SUBMITTALS

- A. Product data:
 - 1. Submit complete materials list of items proposed for the work.
 - 2. Submit piping and sewer structures product data.
- B. Provide site drainage record drawings:
 - 1. Legibly mark drawings to record actual construction.
 - 2. Indicate horizontal and vertical locations, reference to permanent surface improvements.
 - 3. Identify field changes of dimension and detail and changes made by change order.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle piping and accessories to prevent damage and deterioration.

1.06 PROJECT CONDITIONS

- A. Examine project record drawings to ascertain locations of underground and surface utility lines.
- B. All work under this Section shall be installed in accordance with the Laws, Ordinances, Rules and Regulations of all Local State and Federal authorities having jurisdiction, the Rules and Regulations of the National Board of Fire Underwriters, and the Public Utility Companies.
- C. Notify all municipal departments and/or public utility owners concerned, of the time and location of any work which may affect them. Cooperate and coordinate with them in the protection and/or repair of any utilities.
- D. Protect existing trees, plants, lawns, and other features designated to remain as part of the landscape work.
- E. Protect excavations by shoring, bracing, sheeting, underpinning, or other methods, as required to prevent cave-ins or loose dirt from entering excavations. Barricade open excavations and post warning lights at work adjacent to public streets and walks.
- D. Underpin adjacent structure(s), including utility service lines, which may be damaged by excavation operations.
- E. Promptly repair damage to adjacent facilities caused by site drainage earthwork operations. Cost of repair at Contractor's expense.
- F. Promptly notify the Owner of unexpected sub-surface conditions.

PART 2 PRODUCTS

2.01 GENERAL

- A. Drawings and specifications are intended to supplement and explain each other. Materials not specifically mentioned in the specifications shall be as indicated on the drawings. Where conflicts occur between the drawings and/or specifications or within either document itself, the item or arrangement of better quality, greater quantity or higher cost shall be included in the Contractor's bid. Where no specific kind of quality of material is given, a first-class standard article shall be furnished.

2.02 PIPE AND FITTINGS

- A. Site drainage piping: Provide types and sizes indicated. Provide matching fittings, and accessory components to ensure continuity of the site drainage system.
 - 1. Polyvinyl chloride (PVC) sewer pipe and fittings: ASTM D3034-SDR35 with ASTM C443 rubber gaskets.
- B. Sub-drainage piping: Provide types and sizes indicated. Provide matching fittings, and accessory components to ensure continuity of the site drainage system.
 - 1. Polyvinyl chloride (PVC) sewer pipe and fittings: ASTM D3034-SDR35 with ASTM C443 rubber gaskets.

2.03 DRAINAGE RECHARGE STRUCTURES

- A. Structures shall be H-20 Cultec Recharger 150 HD Chamber System, or approved equal. See drawings for additional specifications and requirements.
- B. Inspection ports: 6" SDR35 PVC. Provide a smooth black iron locking frame and cover to be mounted flush with adjacent paving, by Neenah or equivalent.

2.04 MINI-DRAIN MANHOLE

- A. Mini-drain Manhole shall be 30" diameter H-20 Mini-Catch basin as supplied by Shea Concrete Products, 773 Salem Street, Wilmington, MA 01887, Phone: 800-696-7432, <http://www.sheaconcrete.com/>, or approved equal. Supply with solid frame and cover.

2.05 NDS DRAIN SUMP BOX

- A. NDS Drain Sump Box shall be 12" X 12" NDS #1225 Sump Box with 12" NDS #1217 Extension Risers as required, as supplied by NDS drainage products, <http://www.ndspro.com/>, or approved equal.

2.06 ADJUSTMENTS TO EXISTING MANHOLES

- A. Catch basins, manholes and yard drains shall be constructed of brick and concrete, concrete block, precast, or plastic as shown on the drawings. Conforming to ASTM C-119 or precast concrete units conforming to ASTM C-478.
- B. Frames and grates: ASTM A48 grey cast iron, shop-applied coal-tar-pitch varnish coating. Conforming to Standard Specifications M8.03.0, light-duty, with pedestrian friendly grate openings.
- C. Precast concrete manhole barrels and cones: ASTM C478, 5" wall thickness with ASTM C443 "O"-ring gasket joints. Sections shall have tongue and groove joints. Maximum two lifting holes or cast-in lifting devices per section.
 - 1. Precast base shall be manufactured with wall openings to receive the ends of pipes which are to be connected to the structure.
 - 2. Pipe openings in base shall be minimum size required to receive pipe, and shall be accurately set to conform to the required line and grade.
- D. Pipe shall be joined to precast base using either 'Lock Joint Flexible Manhole Sleeve', manufactured by Lock Joint Concrete Pipe, Interpace Corporation, Parsippany, NJ 07054, or 'Press Wedge II', manufactured by Press-Seal Gasket Corporation, Fort Wayne, IN 46808.
- E. Manholes shall have shaped brick inverts.
- F. Concrete masonry units: ASTM C139.
- G. Brick: ASTM C-32, Grade MS., ASTM C-32, Grade SW, or ASTM C-55, Grade N-11. Brick for sewer manhole invert channel shall conform to ASTM C-32, Grade SS.
- H. Mortar:
 - 1. Mortar for laying and parging concrete masonry: 1 part portland cement and 2 parts sand.
 - 2. Mortar for brickwork: 1 part portland cement, 1/2 part hydrated lime, and 4-1/2 parts sand.
- I. The exterior surfaces of all manholes and catch basins shall be coated with Super Service Black by Koppers or an equivalent product by Mobil Tnemac, or Approved equal.

2.05 ACCESSORY MATERIALS

- A. Concrete: 3,000 psi air entrained concrete complying with the Standard Specifications.
- B. Drainage fill (Around Cultec Systems): Clean granular sand complying with M1.04.0 Type a, Sand Borrow
- C. Trap Rock: Clean, angular rock, 1-1/2" – 2" in size.
- D. Earth fill: Natural sandy-clay subsoil, soil-rock mixtures or approved excavated materials, free of

foreign matter, organic material, and debris. Excavated materials removed in earthwork excavation operations may be used as backfill when acceptable to the Owner.

- E. Soil Separator: Rot resistant polypropylene filter fabric, water permeable and unaffected by freezing and thawing.
- F. Other Materials: As proposed by the contractor and acceptable to the Owner.

PART 3 EXECUTION

3.01 PREPARATION

- A. Lay out site drainage work and establish extent of excavation by area and elevation. Designate and identify datum elevation and project engineering reference points. Set required lines, levels, and elevations.
- B. Do not cover or enclose work of this Section before obtaining required inspections, test, approvals, and location recording.
- C. Remove existing paving, including base material, as required to accommodate site drainage work. Saw cut existing paving to provide uniform straight transition at new to existing paving.

3.02 EXISTING UTILITIES

- A. Before starting excavation, establish the location and extent of underground utilities in the work area. Exercise care to protect existing utilities during earthwork operations. Perform excavation work near utilities by hand and provide necessary shoring, sheeting, and supports as work progresses.
- B. Protect active utility services covered by excavation.

3.03 INSTALLATION

- A. Perform excavating and backfilling as required to install site drainage work.
- B. Provide trench wall support and pumping of surface and ground water as required to provide suitable conditions for performing the work.
- C. Excavate trenches to accommodate indicated bedding conditions and material. Trim and shape trench bottoms to proper line and grade, free of irregularities. Remove unstable material and replace with compacted fill.
- D. Install site drainage system true to grade and alignment indicated.
 - 1. Provide necessary equipment for lowering pipe safely into trenches. Handle pipe and accessories to prevent damage. Damaged materials replaced at Contractor's expense.
 - 2. Do not place pipe in water, nor when trench or weather is unsuitable for site drainage work.

3. Remove all dirt and foreign material from pipe before installation. Provide bulkheads as required to prevent entrance of dirt or water after installation.
 4. Lay and fit pipe sections to provide a smooth, uniform invert, with sealed joints and full bearing in bedding material. Provide continuous fall in flow direction.
 5. Excavate bell holes under each bell to ensure uniform bedding for all types of bell and spigot piping.
 6. Install pipe joint gaskets in accordance with manufacturer's recommendations. For pipe connections requiring mortared joints, the pipe bell shall be caulked with jute or oakum and the remainder of the joint grouted full with cement mortar.
 7. Cut pipe ends entering structures flush with inner face of structures.
 8. Extend site drainage system to outfall indicated and make required connection.
 9. Obtain required inspections and perform testing prior to backfilling. Remove obstructions, replace damaged components, and retest as required. Provide a satisfactory free flowing site drainage system.
- E. Backfill trenches with an approved backfill material, free from large clods, stones, and debris.
1. Backfill trenches in 8" compacted layers until there is a cover of not less than 24" over piping. Place remaining backfill material in 12" compacted layers.
 2. Backfill evenly on both sides of piping for its full depth. Provide thorough compaction of fill under pipe haunches.
 3. Provide granular backfill at all paved areas.
- F. Mechanically compact backfill in accordance with Section 02200 requirements. Water settling, puddling, and jetting as a compaction method are not acceptable.
- G. Fill, compact, and restore to original level and condition all settlement.
- H. Replace paving, lawns, and finished surfaces removed to accommodate the site drainage system, except where new surfaces are provided as part of the work.
- I. Construct clean-outs and other structures as indicated.
- J. Install Drain Inlets in accordance with Manufacturer's recommendations.

3.04 INSTALLATION- SUBDRAIN

- A. Provide a compacted earth base. Hand trim excavations to required elevation. Place and compact earth fill as required to fill low areas and provide a positive drainage flow.
- B. Place filter fabric in excavation to completely surround drainage fill as indicated on drawings.

- C. Install minimum 8" layer of drainage fill over compacted earth base for bedding drainage pipe.
- D. Lay drain pipe with perforations down, joints closed, and firmly bedded in drainage fill material. Provide full bearing for each pipe section. Provide continuous slope in the direction of flow.
 - 1. Provide collars and couplings for all in-line joints and all, elbow, or bend sections for all corners and changes in directions.
 - 2. Provide recesses to receive bell and spigot ends.
 - 3. Provide non-perforated run out pipe. Extend drainage system to out fall indicated and make connection.
- E. Obtain required inspections and perform testing before backfilling. Remove obstructions, replace damaged components, and retest system as required. Provide a satisfactory free flowing subdrainage system.
- F. Place drainage fill over drain piping after satisfactory testing and acceptance. Compact drainage fill in layers not exceeding 3" in loose depth. Exercise care to avoid damage or displacement of installed piping.
 - 1. Completely cover drain lines to width of at least 6" on each side of pipe and above top of pipe to finish grade.
 - 2. Provide soil separator over granular backfill.

3.05 INSTALLATION OF RECHARGE CHAMBERS

- A. Install recharge chambers as in accordance with manufacturer's instructions and as shown on the drawings.

3.06 INSTALLATION OF MANHOLES, CATCH BASINS, CLEANOUTS

- A. Construct manholes, catch basins, cleanouts, and other sewer structures as indicated.
 - 1. Install sewer structures on a sound cast-in-place or precast segmented concrete base.
 - 2. Lay radial and batter concrete masonry with full mortar joints completely filled with portland cement mortar. Strike joints flush with surface of concrete masonry.
 - 3. Horizontal joints shall not exceed 1/2". Vertical joints shall not exceed 1/4" on their interior surface.
 - 4. Provide headers where required to adjust frames to grade, breaking joints between courses.
 - 5. Parge inside and outside face of masonry structure walls with 1/2" mortar.
 - 6. Set frames and covers to required grade and bed in place with mortar.

7. Perform no work when the temperature is below 32 degrees F.

J. Install Mini-drain Manhole and NDS Drain Sump Box in accordance with manufacturers recommendations.

3.07 ADJUSTMENT AND REMODELING OF EXISTING STRUCTURES

A. Perform required adjustments and/or remodeling of existing drainage structures as directed by the Drawings and in accordance with the requirements of new construction. The Contractor is to discuss the remodeling of any existing structure with the proper local and state officials.

3.08 DISPOSAL OF WASTE MATERIALS

A. Stockpile, haul from site, and legally dispose of waste materials, including excess excavated materials, rock, trash, and debris.

B. Maintain disposal route clear, clean, and free of debris.

3.09 CLEANING

A. Maintain site drainage piping and structures in a clean workable condition during construction operations.

B. Flush site drainage system with water in sufficient volume to obtain free flow through each line. Remove all silt, trash, and debris just prior to acceptance of work.

C. Upon completion of site drainage work, remove tools and equipment. Provide site clear, clean, free of debris, and suitable for site work operations.

3.10 FAULTY CONSTRUCTION

A. Any pipe or structure showing settlement after laying or which is not in true alignment or is otherwise unsatisfactory before final acceptance of the work shall be taken up and re-laid at no additional cost to the Owner.

END OF SECTION

SECTION 02870

SITE FURNISHINGS

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. The General Documents, as listed in the Table of Contents, and applicable parts of Division 1, General Requirements shall be included in and made a part of this Section.
- B. Examine all Drawings and all other Sections of the Specifications for requirements therein affecting the work of this trade.

1.02 SCOPE OF WORK

- A. Provide site improvements as shown and specified. The work includes:
 - 1. Benches without backs.
 - 2. Trash Receptacles.
 - 3. Signage.
 - 4. Tennis net posts with ground sleeve and tennis nets.
 - 5. Alternate #1: Net for Quick Start tennis court.
 - 6. Alternate #2: Bicycle Rack.

1.03 QUALITY ASSURANCE

- A. Comply with Section 02000 requirements.
- B. Materials and methods of construction shall comply with the following standards:
 - 1. Massachusetts Dept. of Public Works, Standard Specifications for Highways and Bridges, (Standard Specifications).
 - 2. American Society for Testing and Materials, (ASTM).
 - 3. American Association of State Highway and Transportation Officials, (AASHTO).
 - 4. ADA: Americans with Disabilities Act.
 - 5. Manual on Uniform Traffic Control Devices.
 - 6. United States Tennis Associations standards.

1.04 SUBMITTALS

- A. Submit manufacturer's product data for each type of site improvement required.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver site improvements materials and equipment in the manufacturer's original packaging with tags and labels intact and legible. Handle and store material to prevent damage and deterioration.

1.06 PROJECT CONDITIONS

- A. Build-in footings and other items required before final grading and surfacing is completed. Do not begin final installation of site improvements before completion of final grading or surfacing.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Bench with back: Model # 57-60PL, 6' recycled plastic bench with metal frame and recycled plastic seat and back, surface mount, as manufactured by Dumor, Inc., local representative M.E. O'Brien & Sons, Medfield, MA, (508) 359-4200, or approved equal. Plastic color: Grey. Frame color: Black.
- B. Trash Receptacle: Receptacle #70-22-PL, Plastic color: Grey. Frame color: Black, as manufactured by Dumor, Inc., local representative M.E. O'Brien & Sons, Medfield, MA, (508) 359-4200, or approved equal.
- C. Signage: All signs shall be manufactured in accordance with the Manual on Uniform Traffic Control Devices, Chapter 2C – Warning Signs. Signs to be made of .080 gauge aluminum.
 - 1. Posts: Breakaway U-style, 2lb./l.f. Anchor portion shall be 36" long and extend 6" above grade.
 - 2. Handicap Parking Sign: See drawings. Bottom of sign to be minimum 6'-6" above finish grade.
 - 3. Park Identity and Regulation signs, to be supplied by Owner and installed by Contractor. Mount Signs on tennis court fencing in indicated locations.
- F. Supply and install five (5) tennis post sets. Tennis posts shall be Jay-Pro RTP-300 internal wind posts with removable handle and optional ground sleeve, or approved equal. Provide all required accessories for installation as recommended by manufacturer. Contact: Jaypro Sports LLC, 976 Hartford Turnpike, Waterford, CT 06385, info@jaypro.com, 800-243-0533.
- G. Supply five (5) tennis nets. Tennis nets shall be Jay-Pro CCPTN42 Country Club Pro tennis nets, or approved equal. Supply with Jay-Pro A-2 center strap and anchor.
- H. Alternate #1: Supply and install one set Quick-start nets and posts, Douglas Premier 3" OD internal wind posts and compatible net, available from: Douglas Sports, 3441 S 11th Ave Eldridge, IA 52748, 1-800-553-8907, or approved equal. Supply with ground sleeves.

- I. Alternate #2: Bike Racks: One EXPO® 4508 W Series Bicycle rack as supplied by Cora Bike Racks. 1-800-354-8624, E-Mail: info@cora.com, <http://www.cora.com/product1.htm>. Local representative M.E. O'Brien & Sons, Medfield, MA, (508) 359-4200, or approved equal. Color: Black.

2.02 ACCESSORIES

- A. Grout shall be non-shrink, non-metallic, non-staining, such as 'Por-rok' or approved equal.
- B. Concrete for footings shall be 3,000 psi concrete as specified under Section M4 of the Standard Specifications, unless otherwise noted on the Drawings or in these Specifications.
- C. Filter Fabric shall be Mirafi HP 270 manufactured by TC Mirafi, Pendergrass, GA, (888) 795-0808, or approved equal.
- D. Other Materials: As selected by the Contractor and approved by the Landscape Architect.

PART 3 EXECUTION

3.01 PREPARATION

- A. Examine subgrades, finished surfaces, and installation conditions. Do not start site improvements work until unsatisfactory conditions are corrected.
- B. Locate and layout all site improvements. Obtain Landscape Architect's acceptance of layout prior to installation.

3.02 INSTALLATION OF SITE IMPROVEMENTS.

- A. Locate site improvements equipment at the lines and grades shown on the Drawings and according to the specifications of the manufacturer of the equipment. All minimum dimensions shall be met. If minimum dimensions are not met by the Contractor, they shall remove and relocate any or all equipment at no additional cost to the Owner. Assemble and install equipment in accordance with manufacturer's recommendations.
- B. Install equipment in concrete foundations as shown and as recommended by manufacturer. Place foundation concrete and tamp for consolidation. Align posts both vertically and laterally. Hold in position during concrete placement and finishing operations. Finish surface of concrete 3" below surrounding surface of paving or finished grade, or as noted on drawings.
- C. Provide 20" diameter round concrete footing 42" deep for trash receptacle. Anchor receptacle to footing with anchor bolts in accordance with manufacturer's recommendations.

3.03 CLEANING

- A. Perform cleaning during installation of the work and upon completion of the work. Remove from site all debris and equipment. Repair all damage resulting from site improvements installation.

END OF SECTION

SECTION 02875

FENCING

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. The General Documents, as listed in the Table of Contents, and applicable parts of Division 1, General Requirements shall be included in and made a part of this Section.
- B. Examine all Drawings and all other Sections of the Specifications for requirements therein affecting the work of this trade.

1.02 SCOPE OF WORK

- A. Provide tennis court fencing as shown and specified. The work includes:
 - 1. 10' high, 9 ga. black vinyl clad commercial-grade chain link fencing system.
 - 2. 6' high, 9 ga. black vinyl clad commercial-grade chain link fencing system (Alternate #1).
 - 3. Swing Gates with heavy-duty hardware.

1.03 QUALITY ASSURANCE

- A. Comply with Section 02000 requirements.
- B. Provide chain link fences as complete units produced by a single manufacturer, including necessary erection accessories, fittings, and fastenings.
- C. Installation: Performed only by the manufacturer or an experienced fence installer approved by manufacturer.
- D. Materials and installation shall comply with the following standards:
 - 1. American Society for Testing and Materials, (ASTM).
 - 2. Chain Link Manufacturers Institute, (CLMI).

1.04 SUBMITTALS

- A. Submit manufacturer's product data for each type of fencing, components, and finish required, including all gate hardware.
- B. Submit shop drawings. Include plan layout and details illustrating height, location, and sizes of posts, rails, braces, gates, and anchorage. Provide hardware list and erection procedures. Include

cane-bolt locking system for vehicle access gate.

- C. Submit installer's certification that furnished materials meet specification requirements.
- D. Provide chain link fence record drawings:
 - 1. Legibly mark drawings to record actual construction.
 - 2. Indicate horizontal locations, referenced to permanent surface improvements.
 - 3. Identify field changes of dimension and detail and changes made by Change Order.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver chain link fence materials in the manufacturer's original packaging with tags and labels intact and legible.
- B. Handle and store material to prevent damage and deterioration.

1.06 PROJECT CONDITIONS

- A. Do not begin chain link fencing installation before completion of final grading.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Chain link fabric: One piece width, full height up to 10'-0", 1-3/4" mesh, 9 gauge core thickness steel wire. Top and bottom selvages knuckled.
- B. Framework: Provide manufacturer's standard round pipe, except as otherwise indicated.
- C. Hardware and accessories: Provide manufacture's standard cast heavy-duty hardware and accessories, except as otherwise indicated.
- D. Finish: All fabric, posts, frames and components to be: Polyvinyl chloride (PVC), plastic resin finish over galvanized steel wire, not less than 7 nor more than 20 mils thick. Coated before fabric fabrication. Color: Black.
- E. Acceptable Manufacturers/Suppliers:
 - 1. Anchor Fence by Master-Halco, Inc. Boston Area Office: 63 Manley St., W. Bridgewater, MA 02379, (508) 583-7474, (800) 969-1669, <http://masterhalco.com>.
 - 2. Ameristar Color-coated Chain Link Fencing: Boston Area Office: 1150 Providence Highway, Sharon, MA 02067, 888-333-3422, www.ameristar.com.
 - 3. Other manufacturers offering comparable products may be acceptable with approval.

2.02 COMPONENTS

- A. Provide posts and rails in sizes as noted on drawings.
- B. Provide continuous rails in manufacturer's longest lengths, with couplings for each joint. Provide necessary hardware for attaching rails to each post.
- C. Post braces: Provide bracing assemblies at each end posts and at both sides of corner and pull posts.
 - 1. Locate horizontal brace at mid-height of fabric.
 - 2. Use 1.660" OD steel pipe, for horizontal brace and 0.375" diameter rod with turnbuckle for diagonal truss.
- D. Gate posts: Gate leaves 5'-0" wide or less.
 - 1. 3" OD steel pipe, 5.79 lbs. per lineal foot.
- E. Gate posts: Gate leaves over 5'-0" wide.
 - 1. 4.0" OD steel pipe, 9.11 lbs per lineal foot.
- F. Gate frames: Leaf width 5'-0" or less.
 - 1. 1.660" OD steel pipe, 2.27 lbs. per lineal foot.
- G. Gate frames: Leaf width exceeding 5'-0".
 - 1. 1.90" OD steel pipe, 2.72 lbs. per lineal foot.

2.03 ACCESSORIES

- A. Tubular post tops: Rounded, weather tight closure caps, 1 top for each post. Provide tops with openings to accommodate top rails. Finish matching framework finish.
- B. Sleeves, stretcher bars, stretcher bar bands, clips, ties, rail ends, fasteners, fittings, and accessories: Provide manufacturer's standard complying with CLMI specifications, except as noted below. Finish matching framework finish.
 - 1. Rail clamps shall be standard clamps (boulevard clamps) furnished complete with fasteners with ASTM Designation A153.
 - 2. Fabric Bands for Tying Fabric: A-58 self-locking "Bandit Ties" as manufactured by Page Aluminum Steel Corp., Monessan, PA or an approved equal. Fabric bands shall match vinyl color.
- C. Concrete: ASTM C94 ready-mixed concrete, minimum 28-day compressive strength of 3,000 psi, air-entrained 2% to 4%.

2.04 GATES

- A. Fabricate gate perimeter frames of tubular members assembled by welding or with special fittings at corners. Provide additional horizontal and vertical members to ensure proper operation and for attachment of fabric, hardware, and accessories.
- B. Gate fabric: Metal and finish matching fence fabric.
- C. Gate hardware: Provide manufacturer's heavy-duty hardware, complete with latches, stops, keepers, and hinges complying with CLMI specifications. Provide hardware of sufficient design and strength for satisfactory gate operation. Provide heavy-duty lockable cane bolt at 10' double gate. Supply with conventional gate latch, ADA not required.
- D. ADA compatible lever gates latches: Locinox Model #LK40USL Chain Link Gate Lock Kit for 1-5/8" - 1-7/8" Round Frame, with ADA compatible lever option.
<http://www.hooverfence.com/catalog/hardware/locinox/images/type-lakq40usl-3019la.jpg>. Supply with necessary accessories for a complete installation.
- E. Provide solid kick plates at base of gates as shown and detailed.

PART 3 EXECUTION

3.01 INSPECTION

- A. Examine final grades and installation conditions. Do not start chain link fence system work until unsatisfactory conditions are corrected.

3.02 PREPARATION

- A. Lay out complete fence lines. Locate and mark post positions. Space line posts equally and at maximum 10'-0" on center spacing.
- B. Provide corner posts at positions where fence changes direction more than 10 degrees. Provide end posts at both sides of all openings.

3.03 INSTALLATION OF FENCES

- A. Install the chain link fence system in accordance with the manufacturer's installation instructions and complying with CLMI specifications.
- B. Provide a rigid, plumb, finished fence structure with fabric tight and in tension; of the height indicated on the drawings.
- C. Drill post holes into firm, undisturbed, or compacted earth.
 - 1. Hole diameter: Minimum 3 times the post diameter.
 - 2. Hole depth: Minimum 3" deeper than the post setting depth. Total depth as noted above.

3. Line Post depth: Minimum of 42" depth.
 4. Gate post depth: In accordance with manufacturer's recommendations for gate size indicated, minimum of 48" depth.
 5. Remove excavated post hole soil from the site.
- D. Install end, corner, and pull posts in concrete foundations, minimum 48" depth.
 - E. Place foundation concrete and tamp for consolidation. Align each post both vertically and laterally. Hold in position during concrete placement and finishing operation. Trowel finish tops of footings, and slope to direct water away from posts.
 - F. Top rails: Install continuously through post caps or extension arms.
 - G. Brace assemblies: Install brace assemblies where required.
 - H. Tension wire: Install tension wires before stretching fabric and tie to each post with snap-ties.
 - I. Stretch fabric tight between terminal posts. Install on security side of fence, and anchor securely to framework. Position bottom of fabric maximum of 1" above ground level at each post.
 - J. Cut fabric to form continuous piece between terminal posts. Pull the fabric taut and snap-tie to posts, top rail, and bottom tension wire. Install fabric on the outside of the perimeter fence. Anchor to framework so that the fabric remains in tension after the pulling force is released. Bend wire ties to minimize hazard to persons.
 - K. Peen bolt threads to prevent removal of nuts.
 - L. Install gates plumb, level, and secure for full opening without interference. Adjust hardware for smooth operation. Verify self-latching mechanisms are fully operational. Lubricate where necessary.
 1. Install locking cane bolt at double gate in concrete footing, 24" deep.

3.03 CLEANING

- A. Perform cleaning during installation of the work and upon completion of the work. Remove from site all debris and equipment. Repair all damage resulting from fencing installation.

END OF SECTION

SECTION 02930

TOPSOILING AND SEEDING

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. The General Documents, as listed in the Table of Contents, and applicable parts of Division 1, General Requirements shall be included in and made a part of this Section.
- B. Examine all Drawings and all other Sections of the Specifications for requirements therein affecting the work of this trade.

1.02 DESCRIPTION

- A. Provide labor, materials, and equipment necessary to complete the work of this Section as shown and specified. The work includes:
 - 1. Spreading Topsoil.
 - 2. Fine Grading.
 - 3. Soil preparation.
 - 4. Seeding lawns and other indicated areas.
 - 5. Hydro-seeding lawns and other indicated areas.
 - 6. Mulching.
 - 7. Maintenance.

1.03 QUALITY ASSURANCE

- A. Comply with Section 02000 requirements.
- B. Provide and pay for topsoil testing. Testing agency shall be acceptable to the Landscape Architect. Provide the following data:
 - 1. pH factor.
 - 2. Mechanical analysis.
 - 3. Percentage of organic content.

4. Recommendations on type and quantity of additives required to establish satisfactory pH factor and supply of nutrients to bring nutrients to satisfactory level for planting.

1.04 SUBMITTALS

- A. Submit seed vendor's certification for required grass seed mixture, indicating percentage by weight, and percentages of purity, germination, and weed seed for each grass species.
- B. Submit the following material samples:
 1. Hydromulch.
- C. Submit the following materials certification:
 1. Fertilizer (s) analysis.
 2. Tackifier.
 3. Asphaltic emulsion.
- D. Submit materials test report.
- E. Upon seeded lawn acceptance, submit written maintenance instructions recommending procedures for maintenance of lawns.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver seed and fertilizer materials in original unopened containers, showing weight, analysis, and name of manufacturer. Store in a manner to prevent wetting and deterioration.

1.06 PROJECT CONDITIONS

- A. Work notification: Notify Landscape Architect at least 7 working days prior to start of seeding operations.
- B. Protect existing utilities, paving, and other facilities from damage caused by seeding operations.
- C. Perform seeding work only after planting and other work affecting ground surface has been completed.
- D. Restrict traffic from lawn areas until grass is established. Erect signs and barriers as required.
- E. Provide hose and lawn watering equipment as required.

1.07 WARRANTY

- A. Provide a uniform stand of grass by watering, mowing, and maintaining seeded areas until final acceptance. Re-seed areas with specified materials which fail to provide a uniform stand of grass until all affected areas are accepted by the Landscape Architect.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Topsoil: Natural, friable, fertile soil characteristic of productive soil in the vicinity, reasonably free of stones greater than 1/2" in size, clay lumps, roots, and other foreign matter.
 - 1. Topsoil shall be loamy sand or sandy loam as classified according to the US Soil Conservation Service Uniform Soils Classification.
 - 2. Utilize on-site stockpiled topsoil as required to complete the work. Screen stockpiled topsoil of all stones greater than 1/2" in size. Provide imported topsoil as necessary to complete the work. Cost of imported topsoil to be included in base bid.
 - 3. Proposed topsoil material shall be acceptable to the Landscape Architect.
- B. Lawn Areas Seed: A drought-resistant blend of tall fescues, bluegrass and ryegrass such as 'Pearl's Premium Sun-Shade Mixture' as supplied by Pearl's Premium, Inc. P.O. Box 5166, Wayland, MA 01778. Other suppliers with substantially similar products may be acceptable with approval.
- C. Fertilizer:
 - 1. Granular, non-burning product composed of not less than 50% organic slow acting, guaranteed analysis professional fertilizer.
 - a. Type A: Starter fertilizer containing 20% nitrogen, 26% phosphoric acid, and 6% potash by weight, or similar approved composition.
- D. Ground limestone: Containing not less than 85% of total carbonates and ground to such fineness that 50% will pass through a 100 mesh sieve and 90% will pass through a 20 mesh sieve.
- E. Straw mulch: Clean oat or wheat straw well seasoned before bailing, free from mature seed-bearing stalks or roots of prohibited or noxious weeds.
- F. Wood cellulose fiber mulch: Degradable green dyed wood cellulose fiber or 100% recycled long fiber pulp, free from weeds or other foreign matter toxic to seed germination and suitable for hydromulching.
- G. Tackifier: Liquid concentrate diluted with water forming a transparent 3-dimensional film like crust permeable to water and air and containing no agents toxic to seed germination.

- H. Asphaltic emulsion binder: Refined petroleum asphalt emulsified in alkaline water without use of clay, starch, or emulsified in alkaline water without use of clay, starch, or like deleterious substances, and not more than 0.75% of saponifiable acids, of a fluid consistency with no petroleum solvents or other diluting agents toxic to seed germination.
- I. Organic compost: Compost shall be a well-rotted, natural material, free of odor, min. 40% organic content by weight, all components passing a 1/2" screen, such as supplied by Agrisource, Inc., 100 Main Street, Amesbury, MA 01913, (978) 388-5110, or approved equal.

PART 3 EXECUTION

3.01 INSPECTION

- A. Examine finish surfaces, grades, topsoil quality, and depth. Do not start lawns work until unsatisfactory conditions are corrected.

3.02 PREPARATION FOR TOPSOILING

- A. Vendor must scarify, roto-tilled, or otherwise loosen subgrade surfaces in lawn areas to a minimum depth of 8 inches prior to spreading topsoil.
- B. Re-establish subgrade surfaces to specified tolerances prior to spreading topsoil.

3.03 FINISH GRADING

- A. Uniformly distribute and spread stockpiled topsoil. Provide 4" average depth at lawn areas, 12" at planting areas. Provide additional imported topsoil as required to complete the work. Use loose, dry topsoil. Do not use frozen or muddy topsoil. Place during dry weather.
- B. Fine grade topsoil eliminating rough and low areas to ensure positive drainage. Maintain levels, profiles, and contours of subgrades.
- C. Remove stones, roots, weeds, and debris while spreading topsoil materials. Rake surface clean of stones 1/2" or larger in any dimension and all debris. Provide surfaces suitable for soil preparation provided under lawn and planting work.
- D. Manually install topsoil at trees to remain. Avoid damage to root system.

3.04 PREPARATION FOR SEEDING

- A. Limit preparation to areas which will be immediately seeded.
- B. Loosen topsoil of lawn areas to minimum depth of 4". Remove stones over 1" in any dimension and sticks, roots, rubbish, and extraneous matter.
- C. Grade lawn areas to a smooth, free draining even surface with a loose, moderately coarse texture. Roll and rake, remove ridges, and fill depressions as required to drain.

- D. Apply limestone, at rate determined by the soil test, to adjust pH of topsoil to not less than 6.0 nor more than 6.8. Distribute evenly by machine and incorporate thoroughly into topsoil.
- E. Apply Type A fertilizer to indicated turf areas at a rate equal to 1.0 lb. of actual nitrogen per 1,000 sq. ft. (220 lb./acre).
- G. Apply fertilizers to renovated lawn areas by mechanical rotary or drop type distributor, thoroughly and evenly incorporated with soil to a depth of 3" by discing or other approved method. Fertilize areas inaccessible to power equipment with hand tools and incorporate into soil.
- H. Restore prepared areas to specified condition if eroded, settled, or otherwise disturbed after fine grading and prior to seeding.

3.05 INSTALLATION OF SEED

A. Seeding:

- 1. Seed immediately after preparation of bed. Spring seeding between April 1 and June 1 and fall seeding between August 15 and October 15 or at such other times acceptable to the Landscape Architect.
- 2. Seed indicated areas within contract limits and areas adjoining contract limits disturbed as a result of construction operations.
- 3. Perform seeding operations for renovated lawn areas when the soil is dry and when winds do not exceed 5 miles per hour velocity.
- 4. Apply seed to renovated lawn areas with a rotary or drop type distributor. Install seed evenly by sowing equal quantities in 2 directions, at right angle to each other. Sow grass seed at a indicated rates.
- 5. After seeding, rake or drag surface of soil lightly to incorporate seed into top 1/8" of soil. Roll with light lawn roller.

B. Hydro-seeding (if selected):

- 1. Use a hydromulcher (sprayer) and apply mixture(s) at the following rates. Mix in accordance with manufacturer's recommendations.
 - a. Seed: 175 lbs./acre
 - b. Type A fertilizer: 220 lbs./acre.
 - c. Tackifier: 60 gals./acre.
 - d. Wood cellulose fiber mulch: 2,000 lbs./acre.

e. Limestone: Rate determined by soil test.

C. Mulching (if mulch is not included with hydro-seed):

1. Place straw mulch on seeded areas within 24 hours after seeding.
2. Place straw mulch uniformly in a continuous blanket at the rate of 2-1/2 tons per acre, or 2-50 lb. bales per 1,000 sq. ft. of area. A mechanical blower may be used for straw mulch application when acceptable to the Landscape Architect.
3. Crimp straw into soil by mechanical means. Anchor straw with liquid tackifier applied uniformly at a rate of 60 gal. per acre.
4. Protect buildings, paving, plantings, and all nonseeded areas from asphaltic emulsion or liquid tackifier over-spray.

3.06 MAINTENANCE

- A. Maintain seeded lawns for a period of at least 60 days after completion and acceptance.
- B. Maintain lawn areas, including watering, spot weeding, mowing, applications of herbicides, fungicides, insecticides, and re-seeding until a full, uniform stand of grass free of weeds, undesirable grass species, disease, and insects is achieved and accepted by the Landscape Architect.
1. Water daily to maintain adequate surface soil moisture for proper seed germination. Continue daily watering for not less than 30 days. Thereafter apply 1/2" of water twice weekly until acceptance.
 2. Repair, rework, and re-seed or sod all areas that have washed out, are eroded, or do not catch.
 3. Mow lawn areas as soon as lawn top growth reaches a 3" height. Cut back to 2" in height. Repeat mowing as required to maintain specified height until acceptance. A minimum of 3 mowings is required. However, continue maintenance, including mowing, until lawn areas are accepted at no additional cost to Owner.
 4. Do not mow Riverfront Mitigation Areas.

3.07 ACCEPTANCE

- A. Inspection to determine acceptance of lawns will be made by the Landscape Architect, upon Contractor's request. Provide notification at least 10 working days before requested inspection date.
1. Lawn areas will be acceptable provided all requirements, including maintenance, have been complied with, and a healthy, uniform, close stand of the specified grass is established free of weeds, undesirable grass species, disease, and insects.

2. No individual lawn areas shall have bare spots or unacceptable cover totaling more than 2% of the individual areas, in areas requested to be inspected.
- B. Upon acceptance, the Owner will assume lawn maintenance.

3.08 CLEANING

- A. Perform cleaning during installation of the work and upon completion of the work. Remove from site all excess materials, debris, and equipment. Repair damage resulting from seeding operations.

END OF SECTION

SECTION 02950
PLANT MATERIALS

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. The General Documents, as listed in the Table of Contents, and applicable parts of Division 1, General Requirements shall be included in and made a part of this Section.
- B. Examine all Drawings and all other Sections of the Specifications for requirements therein affecting the work of this trade.

1.02 DESCRIPTION OF WORK

- A. Provide labor, materials, and equipment necessary to complete the work of this Section as shown and specified. The work includes:
 - 1. Furnishing and installing all plants as indicated.
 - 2. Providing and installing all accessory materials.
 - 3. Pruning, mulching, and watering.
 - 4. Maintenance and 2-year warranty.

1.03 SUBMITTALS AND WORKMANSHIP

- A. Within 14 days of the execution of the Contract, submit a complete list of sources for all plant materials.
- B. Notify Landscape Architect prior to delivery of any materials to site, in accordance with the general conditions.
- C. The Landscape Architect reserves the right to test and reject for cause any materials not meeting material specifications by tests in accordance with methods adopted by the association of Official Agricultural Chemists.
- D. All work under this Section shall be performed by experienced workmen familiar with planting procedures and under the full time supervision of a qualified foreman. Notify the Landscape Architect of the name and telephone number of the foreman 48 hours in advance of the first day of planting operations.

1.04 INSPECTION OF PLANTS

- A. Plants will be inspected and approval given by the Landscape Architect upon delivery for

conformity to Specification requirements. Such approval shall not affect the right of inspection and rejection during the progress of the work.

- B. The Landscape Architect reserves the right to inspect and/or select all trees at the place of growth. The Landscape Architect reserves the right to approve a representative sample of each type of shrub, perennial and ground cover at the place of growth. Such sample will serve as a minimum standard for all plants of the same species used in this work. The Contractor or his representative shall be present for inspection and selection of plants.

PART 2 PRODUCTS

2.01 PLANT MATERIALS

- A. Furnish and plant all plants shown on the drawings and listed thereon. All plants shall be nursery grown under climactic conditions similar to those in the locality of the project, and shall conform also to the botanical names and standards of size, culture, and quality for the highest grades and standards as adopted by the American Association of Nurserymen, Inc. in the American Standard of Nursery Stock, ANSI Z60.1- latest edition, obtainable from American Association of Nurserymen, 230 Southern Building, Washington DC 20005. All plants shall be legibly tagged with proper botanical name.
- B. Attention is called to the fact that the scientific and common names used for plants required under this contract are generally in conformity with the approved names given in the Standardized Plant Names published by the American Joint Committee on Horticultural Nomenclature. The names of varieties not included therein are generally in conformity with the names accepted in the nursery trade.
- C. All plants shall be freshly dug. No heeled-plants from cold storage shall be used. All plants shall be selected specimen quality, exceptionally heavy, symmetrical, tightly knit, so trained and favored in their development and appearance to be unquestionably and outstandingly superior in form, number of branches, compactness and symmetry, typical of their species or variety and shall have a normal habit of growth. Plants shall be sound, healthy, and vigorous, well branched and densely foliated when in leaf; shall be free of disease, insect pests, eggs of larvae; and shall have healthy, well developed root systems. All parts of the plant shall be moist and shall show active green cambium when cut.
- D. Container-grown stock including perennials and ferns shall have been grown in a container long enough for the root system to have developed sufficiently to hold its soil together, firm and whole. No plants shall be loose in the container.
- E. No substitutions of plants may be made without prior approval of the Landscape Architect, for any reason.
- F. Plants larger than those specified in the Plant List may be used if approved by the Landscape Architect but use of such plants shall not increase the contract Price. If the use of larger plants is approved, the spread of roots or ball of earth shall be increased in proportion to the size of the plant.
- G. The height of the trees, measured from the crown of the roots to the top branch, shall not be less

- than the minimum size designated in the Plant List. Except when a clump is designated, the trunk of each tree shall be a single trunk growing from a single unmutilated crown of roots. No part of the trunk shall be conspicuously crooked as compared with normal trees of the same variety. The trunk shall be free from sun-scald, frost cracks, or wounds resulting from abrasions, fire, or other causes. No pruning wounds shall be present having a diameter of more than two inches and such wounds must show vigorous bark on all edges. Evergreen trees shall be branched to within one foot of the ground.
- H. Take caliper measurements 6 inches above ground on trees 4 inches or less, all others at 12 inches above ground.
 - I. Shrubs and small plants shall meet the requirements for spread and/or height stated in the Plant List. The measurements for height are to be taken from the ground level to the average height of the top of the shrub and not to the longest branch. Single stemmed or thin plants will not be accepted. The side branches must be generous, well-twigged, and the plant as a whole well-branched to the ground. The plants must be in a moist vigorous condition, free from dead wood, bruised or other root or branch injuries.
 - J. Balled and Burlapped Plants: All plants furnished "B&B", shall be adequately balled with firm natural balls of earth of diameter and depth not less than that recommended by the American Standard for Nursery Stock. Balls shall be firmly wrapped with untreated burlap and natural rope. All plants which are 2 inches in caliper or over shall be drum-laced. All plants which are 6 inches in caliper or over shall be double burlapped. No balled plants shall be planted if the ball is cracked or broken either before or during the process of planting.

2.20 PLANTING MIXTURE

- A. Topsoil for Planting Beds and Planting soil: Fertile, friable, natural topsoil of loamy character, without admixture of subsoil material, obtained from a well-drained arable site, screened ½", reasonably free from clay, lumps, coarse sands, stones, plants, roots, sticks, and other foreign materials, with acidity range of between pH 6.0 and 6.8. USDA soil classification: Sandy Loam. Provide topsoil free of substances harmful to the plants which will be grown in the soil.
- B. Topsoil Additives:
 - 1. Commercial Fertilizer: a complete fertilizer and shall be a standard product complying with State and United States Fertilizer Laws. Fertilizer shall be delivered to the site in the original unopened containers which shall bear the manufacturer's name and guaranteed statement of analysis. At least 50% by weight of the nitrogen content of the fertilizer shall be derived from organic materials. Fertilizer for lawn areas shall contain not less than 8% nitrogen, 16% phosphorous and 8% potash by weight of ingredients or as otherwise indicated by topsoil test results.
 - 2. Superphosphate: a finely ground phosphate rock as commonly used for agricultural purposes and shall contain not less than 18% available phosphoric acid.
 - 3. Ground Limestone: containing not less than 85% of total carbonates and shall be ground to such fineness that 50% will pass through a 100-mesh sieve and 90% will pass through a 20-mesh sieve. Coarser material will be accepted provided the specified rates of

application are increased proportionately on the basis of quantities passing the 100-mesh sieve.

4. Compost: Compost shall be a well-rotted, natural material, min. 65% organic content by weight, all components passing a 1/2" screen, such as Earthlife compost as supplied by Earthlife, Falmouth, ME, (800) 933-6474, or approved equal.
 5. Bone Meal: Shall be commercial raw bone meal, finely ground, having a minimum analysis of 4% nitrogen and 20% phosphoric acid.
- C. Planting mixture for backfill in accordance with the planting details shall consist of 4 parts native soil to 1 part compost. All amendments shall be thoroughly incorporated into the mixture to assure uniform distribution. No soil shall be used until test required have been made. Soil shall not be delivered or worked in a muddy or frozen condition.

2.03 ANTI-DESICCANT

- A. Anti-desiccant shall be "Wilt-Pruff", available from Nursery Specialty Products, Inc., New York, NY, or approved equal, delivered in manufacturer's containers and used according to the manufacturer's instructions.

2.04 MULCH

- A. Mulch shall be one-year old, well-rotted, shredded bark, dark brown in color.

2.05 MYCORRHIZAL FUNGAL INOCULANT

- A. Mycorrhizal fungal inoculant shall be 3 ounce packets of live spores. Each packet of inoculant shall contain the following:
1. Live spores of VA Endomycorrhizal fungi: minimum 1,000 spores of Vesicular-Arbuscular fungi including: *Entrophosora columbiana*, *Glomus etunicatum*, *Glomus clarum*, and *Glomus* sp.
 2. Live spores of Ectomycorrhizal fungi: minimum 60 million spores of *Pisolithus tinctorius*.
 3. Acrylamide copolymer gel as a water absorbent gel.
 4. *Yucca schidegera*, a dry soluble yucca plant extract.
 5. Soluble sea kelp extract, *Ascophylum nodosum*.
 6. Humic acids, leonardite humates.
- B. Mycorrhizal fungal inoculant shall be as manufactured by Plant Health Care Inc., 440 William Pitt Way, Pittsburgh, PA 15238, 1 (800) 421-9051, or approved equal.

2.06 WATER

- A. The Contractor shall be responsible for supplying and bringing water to any and all areas requiring weathering under the scope of this contract. The Contractor shall furnish all hoses and equipment necessary for watering plant materials.

2.07 ACCESSORY MATERIALS

- A. Stakes: Stakes for supporting trees shall be of round cedar, min. 2.5" dia., capable of standing in the ground for at least two years. Stakes shall be pointed at one end. Refer to the details for sizes.
- B. Supports: Webbed polypropylene strapping.
- C. Support for Vines (if vines are specified):
 - 1. Braided stainless steel wire, of a size sufficient to support vines until they grow onto trellis. Attach support to trellis and columns using screw eyes.

PART 3 EXECUTION

3.01 PREPARATION

- A. Selection and Tagging: Plants may be subject to inspection and approval by the Landscape Architect at their place of growth and upon delivery for conformity to specification requirements. Such approval shall not impair the right of inspection and rejection during progress of the work. The Contractor shall have inspected and "flagged" all material for the Landscape Architect's inspection, if requested.
- B. Planting Contractor shall meet with the Landscape Architect and the Landscape Architect on site to review and schedule work and areas to be planted prior to beginning any construction operations.

3.02 DIGGING, HANDLING, AND PROTECTION OF PLANTS.

- A. All balled and burlapped (B&B) plants shall be dug with firm natural balls of earth, of sufficient diameter and depth to include most of the fibrous roots and conforming to the standards of the American Nurserymen's Association. Wrap balls with untreated burlap and natural rope. No plant moved with a ball will be accepted if the ball is cracked or broken before or during planting operations.
- B. Immediately before digging, the Contractor may spray all evergreen or deciduous plant material in full leaf with anti-desiccant, applying an adequate film over trunks, branches, twigs, and/ or foliage.
- C. Plants shall be dug and prepared for shipment in a manner that will not cause damage to the branches, shape and future development of the plant after replanting. Plant material labels shall be securely attached by wire to all plant material delivered to the planting site, for purpose of inspection and plant identification.
- D. Roots or balls of all plants shall be damp and adequately protected at all times from sun and from

drying winds.

3.03 DELIVERY AND STORAGE

- A. All plants shall be covered when transported to the site. They shall not be stacked upon one another, unless racks clearing the maximum height of the plants are used. Great care shall be exercised not to break fronds or leaves during transportation or handling.
- B. Plants shall not remain unplanted for longer than 7 days after delivery. They shall be temporarily stored in a shady location and protected from the wind. They shall not be allowed to dry out at any time.
- C. Deliver materials to the site in original unopened packages, showing weight, manufacturer's name and guaranteed analysis.
- D. Store materials in such a manner that their effectiveness as approved by the Landscape Architect will not be impaired.
- E. The Landscape Architect reserves the right to reject any material which has become caked or otherwise damaged. Materials shall be uniform in composition, dry and free flowing.

3.04 PLANTING SEASON

- A. Planting season: Unless otherwise shown on the plans or directed by the Landscape Architect the planting season shall be those indicated below. No planting shall be done in frozen ground or when snow covers the ground, or the soil is otherwise in an unsatisfactory condition for planting.
 - 1. Deciduous Material: Spring : March 1st to May 15th (inclusive) except for balled and burlapped material, the planting of which will terminate on May 30th. Fall: From October 15th until the ground freezes. Certain plant items, designated elsewhere in the contract documents, shall be planted in the Spring planting season only.
 - 2. Evergreen Material: Spring: March 1st to June 1st (inclusive). Fall: August 15th to October 1st (inclusive).
 - 3. The Contractor may elect to plant outside these planting periods, but shall advise the Landscape Architect before so doing. All plants installed under such conditions shall meet all conditions of the guarantee.

3.05 INSTALLATION

- A. The Contractor shall exercise caution not to damage existing vegetation.
- B. Staking of areas to be planted: The location of each tree and shrub shall be marked by the Contractor with a stake showing the species and size of the plant material. Alternatively, plants may be placed in their approximate locations for approval by the Landscape Architect. The perimeter of beds of ground covers, perennials, and ferns shall be marked with stakes located not more than six feet apart. Color-code stakes to distinguish between deciduous trees, evergreen trees, and shrub materials. No plant pits shall be dug without the approval of the Landscape

Architect. Notify Landscape Architect 48 hours in advance of required approval.

- C. Excavate plant pits in accordance with planting details.
1. When excavation occurs in areas of heavily compacted earth, stones, concrete chunks or other foreign matter, pits shall be dug 1/2 times wider and 1/2 times deeper than normally required.
 2. Notify Owner of any potential drainage problems encountered during excavation of plant pits.
 3. All excavated material shall be removed as pits are dug and stockpiled in an on-site borrow location as directed by the Landscape Architect.
 4. Tamp soil below ball to prevent settlement, before setting plants in pit. Set plants in pits plumb and straight. Locate root flare prior to planting, and remove all soil above flare. Neatly prune any adventitious roots above root flare. Plant at relative grades as shown on details.
 5. When balled and burlapped plants are set, planting mixture shall be lightly tamped around bases of balls to fill all voids. Remove all materials from the plant pit and root balls, including wire baskets.
 6. After removing plants from containers, loosen soil at perimeter of root ball. Using three-pronged tool, pull out pot-bound roots prior to setting plant in pit and backfilling.
- D. Bed preparation for Annuals and Herbaceous Perennials: Remove all soil to a depth of 12". Backfill beds with a mixture consisting of equal parts topsoil, sand, and compost. The beds shall be raked smooth before planting.
- E. Backfilling: Planting mixture shall be backfilled in layers of not more than six inches and each layer lightly tamped and free of voids before next layer is put in place.
- F. Provide mycorrhizal fungal inoculant packets for all trees/shrubs in areas that are not irrigated. Install in accordance with manufacturer's recommendations. Install at the following quantities:
- | | |
|------------------|-----------------|
| 3"+ cal. trees: | 4 packets/tree |
| 2-3" cal. trees: | 3 packets/tree |
| 7-10' height: | 3 packets/tree |
| shrubs: | 1 packet/ plant |
- G. Wrapping, Guying, and Staking: Wrap trees below 4" only. Inspect trees for injury for trunks, evidence of insect infestation and improper pruning before wrapping. Wrap trunks of all trees spirally from bottom to top with material specified and adequately secure. The wrapping shall overlap and entirely cover the trunk from the ground to the height of the second branch and shall meet neat and snug. Overlap shall be approximately two inches. Stake and support trees as detailed immediately after planting. Guys shall be slightly loose, to allow for natural movement of trees. Stakes shall be plumb. Stakes shall be neat in appearance.

- H. Pruning and Mulching: Pruning shall only be done to remove broken or rubbing branches, sucker growth or air shoots. Pruning shall be done with clean, sharp tools. Mulch as per planting details. Herbaceous perennials and ferns shall be mulched by hand so that none of the crowns or foliage of the plants are covered by the mulch.
- I. Obstructions Below Ground: In the event that rock, underground construction work or obstructions are encountered in any plant pit excavation work under this Contract, alternate locations may be selected by the Landscape architect, at no additional cost to the Owner. Where locations cannot be changed, the obstruction shall be removed, subject to the Landscape Architect's approval, to a depth of not less than three feet below grade and no less than six inches below bottom of roots when plant is properly set at the required grade. Rock removal will be paid as an extra in accordance with the unit price schedule.
- J. Watering: Planting shall be flooded with water twice within the first twenty-four hours at the time of planting, and not less than twice per week until provisional acceptance. Water pit a surrounding area. Contractor shall take special care to monitor the condition of the herbaceous perennial and fern plantings and water as required as to maintain optimum growing conditions.

3.06 MAINTENANCE

- A. Maintenance shall begin immediately after each plant is planted, and continue until Provisional Acceptance. Plants shall be watered, mulched, weeded, pruned, sprayed, fertilized, cultivated, and otherwise maintained and protected as necessary. Stakes and trees shall be straightened as required. Replace any broken or defective stakes immediately. Defective work shall be corrected as soon as possible after it becomes apparent and weather and season permit. Settled plants shall be reset to proper grade and position, planting saucer restored and dead material removed.
- B. Upon completion of planting, and prior to provisional acceptance, remove from site excess soil and debris and repair all damage resulting from planting operations.

3.07 PROVISIONAL ACCEPTANCE

- A. Provisional acceptance is the completion of all planting installation for a particular area or season, and the Owner and Landscape Architect have agreed that the installation is complete and the guarantee period may begin.
- B. The Landscape Architect will observe all work submitted for provisional acceptance upon the written request of the Contractor to the Landscape Architect received at least five days before the anticipated date of inspection. The Contractor may request inspection for provisional acceptance for a portion of the work before completion of the entire installation.
- C. After the observation, the Landscape Architect will prepare a punch list of items to be corrected or replaced in order for provisional acceptance to be granted. All replacements shall be as specified in section 3.08, below. After necessary corrective work has been completed, the Landscape Architect will again observe all work and the Owner will indicate in writing to the Contractor the provisional acceptance of the planting.
- D. Unless otherwise agreed, the Owner will assume plant maintenance after Provisional Acceptance.

3.08 GUARANTEE PERIOD AND REPLACEMENTS

- A. All plants shall be guaranteed by the contractor for not less than two full years from time of provisional acceptance. During this time the Contractor shall inspect all plant materials to determine the adequacy of ongoing maintenance procedures. In addition, Contractor shall straighten stakes and trees as needed. Replace any broken or defective stakes immediately.
- B. By the end of the guarantee period at no additional cost to the Owner, the Contractor shall have replaced any trees and shrubs that are missing, not true to name or size as specified, that have died, that are, in the opinion of the Landscape Architect, unhealthy or unsightly condition, or that have lost natural shape due to dead branches, excessive pruning or poor health. In case of any question regarding the condition and satisfactory establishment of a rejected plant, the Landscape Architect may allow such a plant to remain through another complete planting season after which time the rejected, if found to be dead, in an unhealthy or badly impaired condition, shall be replaced at once.
- C. All replacement planting shall be done during the next planting season that is correct for the species of plant indicated by the Landscape Architect as unacceptable. All replacements shall be plants of the same kind and size as specified in the Plant List. They shall be furnished and planted as specified herein. The cost of replacement shall be borne by the Contractor except where it can be definitely shown that loss resulted from vandalism or theft. All areas, including seeded areas, damaged or disturbed by replacement operations shall be fully restored to their original conditions.
- D. All replacements shall be guaranteed from one year from the date of their planting.
- E. All stakes, supports, and tree trunk wrapping shall be removed and disposed of by the Contractor off site at his expense at the end of the Guarantee Period or prior to that at the discretion of the Landscape Architect.

3.09 FINAL INSPECTION AND FINAL ACCEPTANCE

- A. At the end of the Guarantee Period, the Landscape Architect will observe all work for final acceptance upon the written request of the Contractor to the Landscape Architect received at least five days before the anticipated date of inspection.
- B. After the observation, the Owner and the Landscape Architect will prepare a punch list of items to be corrected or replaced in order for final acceptance to be granted. All replacements shall be as specified in section 3.08, above. After necessary corrective work has been completed, the Landscape Architect will again observe all work and the Owner will indicate in writing to the contractor the final acceptance of the planting.
- C. All replacements planted as conditions of final acceptance shall be guaranteed for one year from the date of provisional acceptance of those replacements, in accordance with Section 3.08, above.
- D. Contractor shall furnish full and complete written instructions (six copies) for maintenance of the planting to the Owner at the time final acceptance.

3.10 CLEANING

- A. Perform cleaning during installation of the work and upon completion of the work. Remove from site all excess materials, soils, debris, and equipment. Repair damage resulting from planting operations.

END OF SECTION

SECTION 04200

TENNIS PRACTICE WALL

PART 1 GENERAL

1.01 DESCRIPTION

- A. Design, provide and install a concrete unit masonry Tennis Practice Wall as shown and specified. The work includes:
 - 1. Concrete unit masonry.
 - 2. Unit masonry accessories.
 - 3. Reinforced Concrete Footing.
 - 4. Mortar.
 - 5. Painting.
- B. See soil test report contained in these specifications for information on existing soils at the site.

1.02 QUALITY ASSURANCE

- A. Materials and methods of construction shall comply with the following standards:
 - 1. National Concrete Masonry Association, (NCMA): TEK Bulletins.
 - 2. The American Society for Testing and Materials, (ASTM).
- B. Comply with the applicable requirements of local governing authorities and American National Standards Institute (ANSI) A41.1, Building Code Requirements for Masonry, for the types of unit masonry construction indicated.
- C. Installation: Performed only by skilled masons with satisfactory record of performance on completed projects of comparable size and quality.
- D. Provide each type of masonry unit from one manufacturing source to ensure uniform texture and color.
- E. Do not change source of brands of mortar materials during the course of the work.

1.03 SUBMITTALS

- A. Submit complete stamped, engineered design for tennis practice wall. Design shall be prepared by and stamped by a Massachusetts registered structural engineer. Include plan, elevation and cross-section. Note size and dimension of all elements, including all reinforcing required. Obtain Landscape Architects and Owner's approval in writing before proceeding with any work in this

section. Preparation of design shall be scheduled with sufficient time for review and revision so that installation of wall may proceed in the most advantageous schedule and will not hold up work. Contractor is responsible for any delay caused by failure to submit design on an appropriate schedule. Shop/design drawings for the wall shall be acceptable to the Town of Arlington Building Department.

- B. The Contractor shall provide copies of product specification sheets on all proposed elements to be installed to the Owner's Representative for approval prior to the start of work, in accordance with the parameters of Division-1. Work on the wall may not commence until product sheets are submitted and approved.
- C. Submit manufacturer's product data for each type of masonry unit, reinforcement, mortar, and accessory required.
- D. Submit manufacturer's certification that masonry units comply with specified requirements.
- E. Submit concrete mix design and test results in accordance with concrete specifications.
- F. Obtain required building permits for wall.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Unit masonry materials:
 - 1. Deliver, store, and handle masonry materials to prevent damage and soiling.
 - 2. Stack masonry units off the ground on wood pallets or platforms. Exercise particular care in the storage, handling, and installation of masonry units. Exposed masonry is utilized as a "finish material." Do not build soiled or damaged masonry units into the work.
- B. Masonry accessories: Deliver, store, and handle masonry accessories to prevent weather damage and deterioration.
- C. Mortar materials:
 - 1. Deliver cement, lime, and admixture materials in manufacturer's unopened and undamaged containers with labels intact and legible. Store materials off the ground, under cover, and protect from weather damage and deterioration.
 - 2. Stockpile and handle aggregates to prevent mixing with foreign materials.

1.05 PROJECT CONDITIONS

- A. Do not use metal accessories with loose rust or other coatings, including ice, which will reduce bond.
- B. Protect partially-complete masonry work against weather damage and moisture, when work is not in progress. Cover tops of walls with strong, waterproof, non-staining membrane. Extend

- membrane at least 2'-0" down both sides of walls and hold securely in place.
- C. Brace unsupported and newly-laid masonry walls. Maintain bracing in place until walls reach design strength.
- D. Cold weather construction:
1. Precondition masonry materials to maintain minimum 50 degree F. temperatures when installed.
 2. Protect masonry from freezing when the temperature of the outside air is 40 degrees F. and falling. Heat materials and provide temporary protection of completed portions of masonry work. Comply with BIA "Construction and Protection Recommendations for Cold Weather Masonry Construction" and NCMA "TEK Bulletin No. 16A."
 3. No masonry work will be permitted when outside air temperature is below 25 degrees F.
 4. Do not use frozen materials or materials mixed or coated with ice or frost.
 5. Do not build on frozen work. Remove and replace masonry work damaged by frost or freezing.
 6. Do not use anti-freeze or calcium chloride in any mortar.
 7. Protect completed masonry work against freezing for not less than 4 days after laying.
- E. Protect sills, ledges, and projections from mortar droppings. Remove excess mortar and stains as work progresses.
- F. Protect adjacent work from damage, soiling, and staining during masonry work operations.

PART 2 PRODUCTS

2.01 CONCRETE MASONRY MATERIALS

- A. Hollow load-bearing units: ASTM C90, Grade N, Type I.
- B. Aggregate: ASTM C33 normal weight aggregate, dry unit net weight not less than 125 lbs. per cu. ft.
1. Exposed units: Washed crushed limestone coarse aggregate and washed limestone sand.
- C. Provide modular dimension, standard concrete masonry units, nominal 8" high x 16" long (7-5/8" x 15-5/8" actual) or as designed and approved, with manufacturer's standard color and texture on exposed faces.
- D. Curing: Cure units in a moisture controlled atmosphere to comply with ASTM C90, Type I units or provide units cured not less than 30 days at atmospheric pressure.

- E. Moisture content: Comply with ASTM C426 requirements.
- F. Provide closures, control joint units, headers, lintels, bond beams, and special shapes required. Provide standard manufactured sizes or cut full size units for fractional course height and lengths.

2.02 MASONRY ACCESSORIES

- A. Horizontal joint reinforcement: Welded truss type with deformed continuous side rods and plain cross rods. Prefabricate in lengths not less than 10'-0" with matching corners and tee units. Unit width of 1-1/2" to 2" less than wall thickness.
 - 1. Multiple wythe/single wythe masonry: Single 9 gage side rods; 9 gage cross rods.
 - 2. Finish: 1.5 ounce hot-dip galvanized finish.
- B. Anchoring devices: Provide strap anchors, inserts, anchor slots, bolts, and rods of type and size indicated. Provide non-corrosive metals or hot-dip galvanized finished steel materials.
- C. Reinforcing bars: ASTM A615, A616, or A617, Grade 60, new domestic deformed steel bars of sizes indicated.
- D. Cleaning agents: Commercial cleaning solutions which will not harm masonry or adjacent materials and is acceptable to the masonry manufacturer. Muriatic acid is not acceptable as a cleaning agent.

2.05 MORTAR MATERIALS

- A. Portland cement: ASTM C150, Type I, natural color.
- B. Masonry cement: ASTM C91.
- C. Hydrated lime: ASTM C207, Type S.
- D. Aggregate:
 - 1. Masonry mortar: ASTM C144, clean masonry sand, not over 10% to pass #100 sieve.
 - 2. Masonry grout: ASTM C404, clean pea gravel, maximum 3/8" size.
- E. Water: Clean, fresh, and potable.

2.06 UNIT MASONRY MORTAR AND GROUT MIXES

- A. Type M mortar: ASTM C270 proportions by volume. Minimum average compressive strength at 28 days of 2,500 psi, either:
 - 1. 1 part portland cement, 1 part masonry cement, not less than 2-1/4 and not more than 3 times the sum of the volumes of cement used of damp, loose sand.

2. 1 part portland cement, 1/4 part hydrated lime, not less than 2-1/4 and not more than 3 times the sum of the volumes of cement and lime used of damp, loose sand.
- B. Measure and batch material either by volume or weight. Use accurate measuring devices to ensure uniformity and coloration of mix. Shovel count measurement of sand is not acceptable.
- C. Mix cementitious material and aggregate in a clean mechanical mixer for at least 5 minutes. Add water in amount to provide satisfactory workable consistency of mortar.
- D. Retemper mortar as required within 2 hours of mixing to replace water lost by evaporation. Use and place mortar in final position within 2-1/2 hours of the initial mixing. Discard mortar after 2-1/2 hours of the initial mixing.

2.05 ACCESSORY MATERIALS

- A. Aggregate Base: Aggregate base for walls shall be 1-1/2" clean crushed stone.
- B. Concrete: ASTM C94 ready-mixed concrete, minimum 28-day compressive strength of 3,000 psi, air-entrained 2% to 4%.
- C. Drainage fill: AASHTO M43 #6 (3/8" to 3/4") clean uniformly graded stone or gravel.
- D. Paint:
 1. Sealer: Latex block filler, apply at 75 s.f./gal.
 2. Finish Coats: Industrial-type latex-acrylic specifically formulated for application on concrete masonry and/or rough surfaces. Provide two coats, each at 1.5 mils. Color: Dark green, to be selected by landscape architect from manufacturer's standard colors. Provide 2" white net line as detailed.

PART 3 EXECUTION

3.01 INSPECTION

- A. Examine substrates and installation conditions. Do not start unit masonry work until unsatisfactory conditions are corrected.

3.02 PREPARATION

- A. Establish lines, levels, and coursing.
- B. Install poured-in-place concrete footing in accordance with Standard Specifications. Build in reinforcing as shown.
- C. Do not wet concrete masonry units.

3.03 INSTALLATION

- A. Build masonry construction to the full thickness indicated. Build single-wythe walls to the actual thickness of the masonry units, using units of nominal thickness.
- B. Cut masonry units with masonry saws to provide clean, sharp, un-chipped edges. Cut units as required to provide pattern shown and to fit adjoining work. Where cutting is required, use the largest size units possible. Provide 100% solid units where webs would be exposed.
- C. Layout walls in advance for accurate spacing of surface bond patterns, with uniform joint widths, and to properly locate openings, movement-type joints, returns, and offsets.
- D. Lay masonry plumb and true. Provide corners and angles square, with courses level, accurately spaced, and coordinated with other work. Use double lines at multiple wythe walls.
- E. Pattern bond: Lay exposed masonry in running bond with vertical joint in each course centered on units in courses above and below. Bond and interlock each course of each wythe at corners. Do not use units with less than 4" of horizontal face dimensions at ends.
- F. Lay hollow concrete masonry units with full mortar coverage on horizontal and vertical face shells. Bed webs in mortar in starting course on footings, load-bearing walls, all courses of piers, columns, and pilasters, and where adjacent to cells or cavities to be reinforce or filled with concrete or grout. Maintain 3/8" joint widths, except for minor variations required to maintain bond alignment.
- G. Tool joints on front (court side) face of wall to a flush, flat condition. Tool all joints on sides, top, and back to a concave joint.
- K. Remove masonry units disturbed after laying; clean and reset in fresh mortar.
- L. Step back unfinished work for joining new work. Rack back 1/2 unit length in each course; do not tooth. Clean exposed surfaces and remove loose masonry units and mortar prior to laying fresh masonry.
- M. Provide interlocking masonry bond in each course at corners and intersecting walls.
- N. Install reinforcing steel and grout where indicated. Comply with drawing details for reinforcing steel size, spacing, and grouting.
- O. Horizontal joint reinforcing: Provide continuous joint reinforcing at indicated walls. Place in every second concrete masonry course, for full height of wall.
 - 1. Lap reinforcement a full width at the corners and at intersections or use special fabricated sections.
 - 2. Fully embed side rods in mortar.
- P. Anchoring masonry work: Provide anchoring devices of the type indicated.
- Q. Provide vertical expansion, control, and isolation joints in masonry where shown. Build in joint

fillers and control joints where indicated.

- R. Finish top of wall with bond beam as shown. Fill cavity complete with mortar. Provide slightly arched top to drain.

3.04 PAINTING

- 1. Protect adjacent work and material from damage. Repair damage at Contractor's expense.
- 2. Maintain work in neat and orderly condition, promptly removing empty containers, waste, rubbish, and debris from site.
- 3. Prepare surfaces and apply materials in accordance with manufacturer's directions. Finished surfaces shall be uniform in finish and color and free of brush marks, sagging, holidays, corduroy, and other imperfections.
- 4. Paint both sides, ends and top of wall. Apply paint and stain with brush, roller, or spray. Spray application of materials shall be acceptable to the Landscape Architect and provide equal dry film mil. thickness as brush application. After paint is dry, paint white 'net' line on court side of wall 4" wide with top of line at elevation 36" above pavement surface.
- 5. Clean adjacent surfaces of spills, spatters, drips, and stains from paint material application. Replace items removed to accommodate painting work.
- 6. Perform cleaning during application of paint materials and upon completion of the work. Remove from site all excess materials, debris, and equipment. Repair damage resulting from painting work.

3.05 CLEANING

- A. Remove and replace masonry units which are loose, broken, stained, or otherwise damaged. Provide new matching units, install as specified and to eliminate evidence of replacement.
- B. Concrete masonry: Wipe off excess mortar as the work progresses. Dry brush with bristle brushes exposed masonry at the end of each day's work. Remove mortar spatters and joint ridges.
- C. Acid cleaning of masonry not permitted. Install and protect installed masonry so that acid cleaning is not required at completion of the work.
- E. Upon completion of the work, remove from site all excess materials, debris, tools, and equipment. Repair damage resulting from unit masonry work operations.

END OF SECTION

0 Lombard Terr
2/6/15
91-256



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
91-256
MassDEP File #
eDEP Transaction #
Arlington
City/Town

A. General Information

Please note:
this form has
been modified
with added
space to
accommodate
the Registry
of Deeds
Requirements

Important:
When filling
out forms
on the
computer,
use only the
tab key to
move your
cursor - do
not use the
return key.



1. From: <u>Arlington</u> Conservation Commission	
2. This issuance is for (check one): a. <input checked="" type="checkbox"/> Order of Conditions b. <input type="checkbox"/> Amended Order of Conditions	
3. To: Applicant:	
<u>Joseph</u> a. First Name	<u>Connelly</u> b. Last Name
<u>Town of Arlington Parks & Rec. Dept</u> c. Organization	
<u>422 Summer St</u> d. Mailing Address	
<u>Arlington</u> e. City/Town	<u>MA</u> f. State
	<u>02474</u> g. Zip Code
4. Property Owner (if different from applicant):	
<u>same as above</u> a. First Name	<u></u> b. Last Name
<u></u> c. Organization	
<u></u> d. Mailing Address	
<u></u> e. City/Town	<u></u> f. State
	<u></u> g. Zip Code
5. Project Location:	
<u>0 Lombard Terrace</u> a. Street Address	<u>Arlington</u> b. City/Town
<u>Map 10, 121</u> c. Assessors Map/Plat Number	<u>Lot 11A</u> d. Parcel/Lot Number
Latitude and Longitude, if known:	
<u></u> d. Latitude	<u></u> e. Longitude



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

0 Lombard Terr
2/6/15

Provided by MassDEP:
91-256
MassDEP File #
eDEP Transaction #
Arlington
City/Town

A. General Information (cont.)

6. Property recorded at the Registry of Deeds for (attach additional information if more than one parcel):
Middlesex
a. County
3508
b. Certificate Number (if registered land)
479
c. Book
d. Page
2/6/15
7. Dates: 1/31/14 1/15/15
a. Date Notice of Intent Filed b. Date Public Hearing Closed c. Date of Issuance
8. Final Approved Plans and Other Documents (attach additional plan or document references as needed):
See attached list
a. Plan Title
Leonard Design Assoc. Andrew Leonard, RLA#679
b. Prepared By
1/15/15 c. Signed and Stamped by
1 inch = 20 feet
d. Final Revision Date e. Scale
f. Additional Plan or Document Title g. Date

B. Findings

1. Findings pursuant to the Massachusetts Wetlands Protection Act:

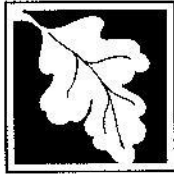
Following the review of the above-referenced Notice of Intent and based on the information provided in this application and presented at the public hearing, this Commission finds that the areas in which work is proposed is significant to the following interests of the Wetlands Protection Act (the Act). Check all that apply:

- a. ☐ Public Water Supply b. ☐ Land Containing Shellfish c. ☒ Prevention of Pollution
d. ☐ Private Water Supply e. ☒ Fisheries f. ☒ Protection of Wildlife Habitat
g. ☐ Groundwater Supply h. ☒ Storm Damage Prevention i. ☒ Flood Control

2. This Commission hereby finds the project, as proposed, is: (check one of the following boxes)

Approved subject to:

- a. ☒ the following conditions which are necessary in accordance with the performance standards set forth in the wetlands regulations. This Commission orders that all work shall be performed in accordance with the Notice of Intent referenced above, the following General Conditions, and any other special conditions attached to this Order. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, these conditions shall control.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

0 Lombard Terr
2/6/15

Provided by MassDEP:
91-256

MassDEP File #

eDEP Transaction #

Arlington

City/Town

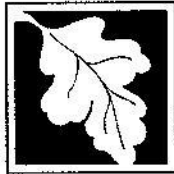
B. Findings (cont.)

Denied because:

- b. ☐ the proposed work cannot be conditioned to meet the performance standards set forth in the wetland regulations. Therefore, work on this project may not go forward unless and until a new Notice of Intent is submitted which provides measures which are adequate to protect the interests of the Act, and a final Order of Conditions is issued. **A description of the performance standards which the proposed work cannot meet is attached to this Order.**
- c. ☐ the information submitted by the applicant is not sufficient to describe the site, the work, or the effect of the work on the interests identified in the Wetlands Protection Act. Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides sufficient information and includes measures which are adequate to protect the Act's interests, and a final Order of Conditions is issued. **A description of the specific information which is lacking and why it is necessary is attached to this Order as per 310 CMR 10.05(6)(c).**
3. ☒ Buffer Zone Impacts: Shortest distance between limit of project disturbance and the wetland resource area specified in 310 CMR 10.02(1)(a) 65
a. linear feet

Inland Resource Area Impacts: Check all that apply below. (For Approvals Only)

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
4. <input type="checkbox"/> Bank	a. linear feet	b. linear feet	c. linear feet	d. linear feet
5. <input type="checkbox"/> Bordering Vegetated Wetland	a. square feet	b. square feet	c. square feet	d. square feet
6. <input type="checkbox"/> Land Under Waterbodies and Waterways	a. square feet e. c/y dredged	b. square feet f. c/y dredged	c. square feet	d. square feet
7. <input type="checkbox"/> Bordering Land Subject to Flooding	a. square feet	b. square feet	c. square feet	d. square feet
Cubic Feet Flood Storage	e. cubic feet	f. cubic feet	g. cubic feet	h. cubic feet
8. <input type="checkbox"/> Isolated Land Subject to Flooding	a. square feet	b. square feet		
Cubic Feet Flood Storage	c. cubic feet	d. cubic feet	e. cubic feet	f. cubic feet
9. <input type="checkbox"/> Riverfront Area	a. total sq. feet	b. total sq. feet		
Sq ft within 100 ft	c. square feet	d. square feet	e. square feet	f. square feet
Sq ft between 100-200 ft	g. square feet	h. square feet	i. square feet	j. square feet



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

O Lombard Terr
2/6/15

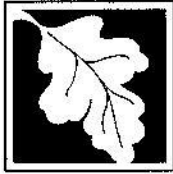
Provided by MassDEP:
91-256
MassDEP File #

eDEP Transaction #
Arlington
City/Town

B. Findings (cont.)

Coastal Resource Area Impacts: Check all that apply below. (For Approvals Only)

	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
10. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below			
11. <input type="checkbox"/> Land Under the Ocean	<u> </u> a. square feet	<u> </u> b. square feet		
	<u> </u> c. c/y dredged	<u> </u> d. c/y dredged		
12. <input type="checkbox"/> Barrier Beaches	Indicate size under Coastal Beaches and/or Coastal Dunes below			
13. <input type="checkbox"/> Coastal Beaches	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. nourishment	<u> </u> d. nourishment
14. <input type="checkbox"/> Coastal Dunes	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. nourishment	<u> </u> d. nourishment
15. <input type="checkbox"/> Coastal Banks	<u> </u> a. linear feet	<u> </u> b. linear feet		
16. <input type="checkbox"/> Rocky Intertidal Shores	<u> </u> a. square feet	<u> </u> b. square feet		
17. <input type="checkbox"/> Salt Marshes	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
18. <input type="checkbox"/> Land Under Salt Ponds	<u> </u> a. square feet	<u> </u> b. square feet		
	<u> </u> c. c/y dredged	<u> </u> d. c/y dredged		
19. <input type="checkbox"/> Land Containing Shellfish	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
20. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, Inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above			
	<u> </u> a. c/y dredged	<u> </u> b. c/y dredged		
21. <input type="checkbox"/> Land Subject to Coastal Storm Flowage	<u> </u> a. square feet	<u> </u> b. square feet		



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

0 Lombard Terr
2/6/15

Provided by MassDEP:

91-256

MassDEP File #

eDEP Transaction #

Arlington

City/Town

B. Findings (cont.)

* #22. If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.5.c (BVW) or B.17.c (Salt Marsh) above, please enter the additional amount here.

22. ☐ Restoration/Enhancement *:

a. square feet of BVW

b. square feet of salt marsh

23. ☐ Stream Crossing(s):

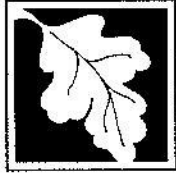
a. number of new stream crossings

b. number of replacement stream crossings

C. General Conditions Under Massachusetts Wetlands Protection Act

The following conditions are only applicable to Approved projects.

1. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Order.
2. The Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
3. This Order does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.
4. The work authorized hereunder shall be completed within three years from the date of this Order unless either of the following apply:
 - a. The work is a maintenance dredging project as provided for in the Act; or
 - b. The time for completion has been extended to a specified date more than three years, but less than five years, from the date of issuance. If this Order is intended to be valid for more than three years, the extension date and the special circumstances warranting the extended time period are set forth as a special condition in this Order.
 - c. If the work is for a Test Project, this Order of Conditions shall be valid for no more than one year.
5. This Order may be extended by the issuing authority for one or more periods of up to three years each upon application to the issuing authority at least 30 days prior to the expiration date of the Order. An Order of Conditions for a Test Project may be extended for one additional year only upon written application by the applicant, subject to the provisions of 310 CMR 10.05(11)(f).
6. If this Order constitutes an Amended Order of Conditions, this Amended Order of Conditions does not extend the issuance date of the original Final Order of Conditions and the Order will expire on _____ unless extended in writing by the Department.
7. Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.



**Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands**

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

0 Lombard Terr
2/6/15

Provided by MassDEP:

91-256

MassDEP File #

eDEP Transaction #

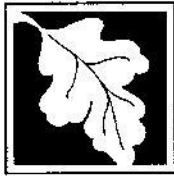
Arlington

City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act

8. This Order is not final until all administrative appeal periods from this Order have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed.
9. No work shall be undertaken until the Order has become final and then has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of the registered land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to the Conservation Commission on the form at the end of this Order, which form must be stamped by the Registry of Deeds, prior to the commencement of work.
10. A sign shall be displayed at the site not less than two square feet or more than three square feet in size bearing the words,

"Massachusetts Department of Environmental Protection" [or, "MassDEP"]
"File Number 91-256 "
11. Where the Department of Environmental Protection is requested to issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before MassDEP.
12. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.
13. The work shall conform to the plans and special conditions referenced in this order.
14. Any change to the plans identified in Condition #13 above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.
15. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Order at reasonable hours to evaluate compliance with the conditions stated in this Order, and may require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.
16. This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Order and to any contractor or other person performing work conditioned by this Order.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

0 Lombard Terr
2/6/15

Provided by MassDEP:

91-256

MassDEP File #

eDEP Transaction #

Arlington

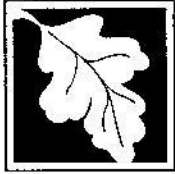
City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

17. Prior to the start of work, and if the project involves work adjacent to a **Bordering Vegetated Wetland**, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the **Conservation Commission**.
18. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Order.
19. The work associated with this Order (the "Project")
- (1) ☒ is subject to the Massachusetts Stormwater Standards
- (2) ☐ is NOT subject to the Massachusetts Stormwater Standards

If the work is subject to the Stormwater Standards, then the project is subject to the following conditions:

- a) All work, including site preparation, land disturbance, construction and redevelopment, shall be implemented in accordance with the construction period pollution prevention and erosion and sedimentation control plan and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Construction General Permit as required by Stormwater Condition 8. Construction period erosion, sedimentation and pollution control measures and best management practices (BMPs) shall remain in place until the site is fully stabilized.
- b) No stormwater runoff may be discharged to the post-construction stormwater BMPs unless and until a Registered Professional Engineer provides a Certification that:
- i. all construction period BMPs have been removed or will be removed by a date certain specified in the Certification. For any construction period BMPs intended to be converted to post construction operation for stormwater attenuation, recharge, and/or treatment, the conversion is allowed by the MassDEP Stormwater Handbook BMP specifications and that the BMP has been properly cleaned or prepared for post construction operation, including removal of all construction period sediment trapped in inlet and outlet control structures;
 - ii. as-built final construction BMP plans are included, signed and stamped by a Registered Professional Engineer, certifying the site is fully stabilized;
 - iii. any illicit discharges to the stormwater management system have been removed, as per the requirements of Stormwater Standard 10;



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

0 Lombard Terr
2/6/15

Provided by MassDEP:

91-256

MassDEP File #

eDEP Transaction #

Arlington

City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

iv. all post-construction stormwater BMPs are installed in accordance with the plans (including all planting plans) approved by the issuing authority, and have been inspected to ensure that they are not damaged and that they are in proper working condition;

v. any vegetation associated with post-construction BMPs is suitably established to withstand erosion.

c) The landowner is responsible for BMP maintenance until the issuing authority is notified that another party has legally assumed responsibility for BMP maintenance. Prior to requesting a Certificate of Compliance, or Partial Certificate of Compliance, the responsible party (defined in General Condition 18(e)) shall execute and submit to the issuing authority an Operation and Maintenance Compliance Statement ("O&M Statement") for the Stormwater BMPs identifying the party responsible for implementing the stormwater BMP Operation and Maintenance Plan ("O&M Plan") and certifying the following:

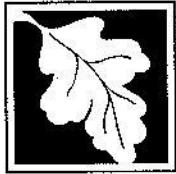
i.) the O&M Plan is complete and will be implemented upon receipt of the Certificate of Compliance, and

ii.) the future responsible parties shall be notified in writing of their ongoing legal responsibility to operate and maintain the stormwater management BMPs and implement the Stormwater Pollution Prevention Plan.

d) Post-construction pollution prevention and source control shall be implemented in accordance with the long-term pollution prevention plan section of the approved Stormwater Report and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Multi-Sector General Permit.

e) Unless and until another party accepts responsibility, the landowner, or owner of any drainage easement, assumes responsibility for maintaining each BMP. To overcome this presumption, the landowner of the property must submit to the issuing authority a legally binding agreement of record, acceptable to the issuing authority, evidencing that another entity has accepted responsibility for maintaining the BMP, and that the proposed responsible party shall be treated as a permittee for purposes of implementing the requirements of Conditions 18(f) through 18(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 18(f) through 18(k) with respect to that BMP shall be a violation of the Order of Conditions or Certificate of Compliance. In the case of stormwater BMPs that are serving more than one lot, the legally binding agreement shall also identify the lots that will be serviced by the stormwater BMPs. A plan and easement deed that grants the responsible party access to perform the required operation and maintenance must be submitted along with the legally binding agreement.

f) The responsible party shall operate and maintain all stormwater BMPs in accordance with the design plans, the O&M Plan, and the requirements of the Massachusetts Stormwater Handbook.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

0 Lombard Terr
2/6/15

Provided by MassDEP:

91-256

MassDEP File #

eDEP Transaction #

Arlington

City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

g) The responsible party shall:

1. Maintain an operation and maintenance log for the last three (3) consecutive calendar years of inspections, repairs, maintenance and/or replacement of the stormwater management system or any part thereof, and disposal (for disposal the log shall indicate the type of material and the disposal location);
2. Make the maintenance log available to MassDEP and the Conservation Commission ("Commission") upon request; and
3. Allow members and agents of the MassDEP and the Commission to enter and inspect the site to evaluate and ensure that the responsible party is in compliance with the requirements for each BMP established in the O&M Plan approved by the issuing authority.

h) All sediment or other contaminants removed from stormwater BMPs shall be disposed of in accordance with all applicable federal, state, and local laws and regulations.

i) Illicit discharges to the stormwater management system as defined in 310 CMR 10.04 are prohibited.

j) The stormwater management system approved in the Order of Conditions shall not be changed without the prior written approval of the issuing authority.

k) Areas designated as qualifying pervious areas for the purpose of the Low Impact Site Design Credit (as defined in the MassDEP Stormwater Handbook, Volume 3, Chapter 1, Low Impact Development Site Design Credits) shall not be altered without the prior written approval of the issuing authority.

l) Access for maintenance, repair, and/or replacement of BMPs shall not be withheld. Any fencing constructed around stormwater BMPs shall include access gates and shall be at least six inches above grade to allow for wildlife passage.

Special Conditions (if you need more space for additional conditions, please attach a text document):

See attached 3 pages, conditions 21-36

20. For Test Projects subject to 310 CMR 10.05(11), the applicant shall also implement the monitoring plan and the restoration plan submitted with the Notice of Intent. If the conservation commission or Department determines that the Test Project threatens the public health, safety or the environment, the applicant shall implement the removal plan submitted with the Notice of Intent or modify the project as directed by the conservation commission or the Department.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

0 Lombard Terr
2/6/15

Provided by MassDEP;
91-256
MassDEP File #

eDEP Transaction #
Arlington
City/Town

D. Findings Under Municipal Wetlands Bylaw or Ordinance

1. Is a municipal wetlands bylaw or ordinance applicable? ☒ Yes ☐ No
2. The Arlington hereby finds (check one that applies):
Conservation Commission
- a. ☐ that the proposed work cannot be conditioned to meet the standards set forth in a municipal ordinance or bylaw, specifically:

1. Municipal Ordinance or Bylaw

2. Citation

Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides measures which are adequate to meet these standards, and a final Order of Conditions is issued.

- b. ☒ that the following additional conditions are necessary to comply with a municipal ordinance or bylaw:

Arlington Bylaw for Wetlands Protection

Title V, Art 8

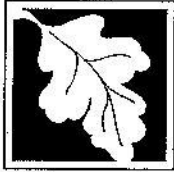
1. Municipal Ordinance or Bylaw

2. Citation

3. The Commission orders that all work shall be performed in accordance with the following conditions and with the Notice of Intent referenced above. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the conditions shall control.

The special conditions relating to municipal ordinance or bylaw are as follows (if you need more space for additional conditions, attach a text document):

See attached 3 pages, conditions 21-36.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

0 Lombard Terr

2/6/15

Provided by MassDEP:

91-256

MassDEP File #

eDEP Transaction #

Arlington

City/Town

E. Signatures

This Order is valid for three years, unless otherwise specified as a special condition pursuant to General Conditions #4, from the date of issuance.

Please indicate the number of members who will sign this form.

This Order must be signed by a majority of the Conservation Commission.

The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office, if not filing electronically, and the property owner, if different from applicant.

Signatures:

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

☐ by hand delivery on

☐ by certified mail, return receipt requested, on

Date

Date

2/6/15

2/6/15

1. Date of Issuance

Seven

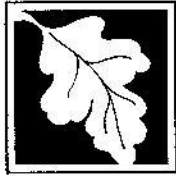
2. Number of Signers

F. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate MassDEP Regional Office to issue a Superseding Order of Conditions. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request of Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Order associated with this appeal will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order, or providing written information to the Department prior to issuance of a Superseding Order.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40), and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal ordinance or bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

0 Lombard Terr
2/6/15

Provided by MassDEP:
91-256
MassDEP File #

eDEP Transaction #
Arlington
City/Town

G. Recording Information

Prior to commencement of work, this Order of Conditions must be recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land subject to the Order. In the case of registered land, this Order shall also be noted on the Land Court Certificate of Title of the owner of the land subject to the Order of Conditions. The recording information on this page shall be submitted to the Conservation Commission listed below.

Arlington Conservation Commission, 730 Massachusetts Ave, Arlington, MA 02476
Conservation Commission

Detach on dotted line, have stamped by the Registry of Deeds and submit to the Conservation Commission.

To:

Arlington
Conservation Commission

Please be advised that the Order of Conditions for the Project at:

0 Lombard Terrace
Project Location

91-256
MassDEP File Number

Has been recorded at the Registry of Deeds of:

Middlesex
County

Book

Page

for: Property Owner

and has been noted in the chain of title of the affected property in:

Book

Page

In accordance with the Order of Conditions issued on:

Date

If recorded land, the instrument number identifying this transaction is:

Instrument Number

If registered land, the document number identifying this transaction is:

Document Number

Signature of Applicant

ARLINGTON CONSERVATION COMMISSION
ORDER OF CONDITIONS – 0 LOMBARD TERRACE
SPY POND FIELD
TENNIS COURT RENOVATION

DEP FILE NO. 91-256

0 Lombard Terr
2/6/15

Referenced Documents and Plans

1. Notice of Intent for Spy Pond Field Tennis Court Renovation, 0 Lombard Terrace., Arlington, MA, 02474, prepared by Andrew Leonard, RLA #679, Leonard Design Associates, 95 Ronald Road, Arlington, MA 02474, and Alberto M. Gala, PE #36434, Gala-Simon Associates, 394 Lowell St, Suite 18, Lexington, MA 02420, prepared for Joseph Connelly, Director, Town of Arlington Recreation Department, 422 Summer St., Arlington, MA 02474, dated December 31, 2014.
Contents: a. Locus
b. photos
c. NOI form
d. Wetland delineation report
e. Drainage Analysis and Storm Water report, revised 1/13/15
f. Maintenance Plan for Drainage System
Plans:
L.1 Existing Conditions and Site Preparation Plan, dated 12/31/14, rev. 1/14/15
L.2 Layout, Materials, and Planting Plan, dated 12/31/14, rev. 1/14/15
C.1 Drainage and Utilities Plan, dated 12/31/14, rev. 1/14/15
C.2 Drainage Details, dated 12/31/14, rev. 1/14/15
E-1 Exhibit Plan – Infiltrated area, Spy Pond Field, dated 1/15/15
2. Memo response to Cori Beckwith, Arlington Conservation Commission regarding email comments dated 1/12/15 for renovation of Spy Pond Field Tennis Courts, prepared by Andrew Leonard, RLA #679, Leonard Design Associates, 95 Ronald Road, Arlington, MA 02474, and Alberto M. Gala, PE #36434, Gala-Simon Associates, 394 Lowell St, Suite 18, Lexington, MA 02420, prepared for Joseph Connelly, Director, Town of Arlington Recreation Department, 422 Summer St., Arlington, MA 02474, dated 1/15/15.

Findings

Based on testimony, documents and other substantial and credible evidence presented at the January 15, 2015 public hearing on the Notice of Intent, the Commission finds under the Wetlands Protection Act and Arlington's Wetlands Protection Bylaw ("Bylaw") that:

1. The following Resource Areas under the Act and Bylaw are present at the site: Buffer Zone and Adjacent Upland Resource Area ("AURA") (Bylaw only).
2. The applicant did not overcome the presumption that the AURA is significant to the presumed bylaw interests.
3. The Commission finds that the design will not adversely impact the Buffer Zone and the Buffer Zone's ability to contribute to the protection of the interests of the WPA.
4. The Commission finds that the proposed work will meet the performance standards for work in the AURA.
5. The stormwater design will decrease the runoff from the site with the addition of the infiltration system.

ARLINGTON CONSERVATION COMMISSION
ORDER OF CONDITIONS – 0 LOMBARD TERRACE
SPY POND FIELD
TENNIS COURT RENOVATION
Additional Special and/or Bylaw Conditions

DEP FILE NO. 91-256

0 Lombard Terr
B/6/15

Conditions 1-20 are the General Conditions.

21. Before work begins, erosion and sediment controls (strawbale and/or siltfence) shall be installed at the limits of the work area shown on the project plan(s) in such a manner as to protect the adjacent wetlands and drainage inlets.
22. Prior to the start of work, the applicant shall place a siltsack or similar protection in the stormdrain inlet in Wellington St.
23. Prior to starting work, the applicant shall submit the names and 24 hour (emergency) phone numbers of project managers or other persons responsible for site work or mitigation.
24. Prior to the start of any grading work, the contractor shall conduct a site walk with the Conservation Administrator to confirm the installation and placement of erosion controls..
25. The applicant shall make sure that a copy of this Order of Conditions, with any reference plans, is available on site at all times, and that contractors, site managers, foremen, and sub-contractors understand its provisions.
26. During construction, the person responsible for on-site compliance shall submit a written monthly status report to the Commission. This report shall include, but not be limited to: the status of construction, changes in the construction schedule, any erosion or pollutant problems and how those problems were resolved. The applicant shall be responsible for ensuring that this report is submitted as required.
27. No vehicles shall be stored over night within 100 feet of Spy Pond. No vehicles shall be maintained (oil changed, refueled) within 100 feet of Spy Pond.
28. Any dirt spilled or tracked onto the parking lot or Grove St shall be swept up and removed daily.
29. All materials and soils that are not used for the approved fill areas shall be completely removed from the site and disposed of as required by law.
30. In the event of discovery of hazardous materials on the site during excavation work, clean up of these materials shall conform to the requirements and standards of State law and regulations.
31. Any dewatering operations shall conform to the following:
 - (a) Notify the Conservation Commission that dewatering is required.
 - (b) Any catch basins, drain and outfalls to be used in dewatering operations shall be cleaned out before operations begin.
 - (c) Any water discharged as part of any dewatering operation shall be passed through filters, on-site settling basins, settling tank trucks, or other devices to ensure that no observable sediments or pollutants are carried into any Resource Area, street, drain or adjacent property.

ARLINGTON CONSERVATION COMMISSION
ORDER OF CONDITIONS – 0 LOMBARD TERRACE
SPY POND FIELD
TENNIS COURT RENOVATION

0 Lombard Terr
2/6/15
DEP FILE NO. 91-256

(d) Measures shall be taken to ensure that no erosion or scouring shall occur on public or private property, or on the banks or bottoms of water bodies, as a result of dewatering operations.

32. Arrangements shall be made as per 31(c) and (d) for any rinsing of tools, equipment, etc. associated with on-site mixing or use of concrete or other materials. Any spillage of materials shall be cleaned up promptly.

33. After the project is completed and the site stabilized, the applicant shall clean out the sump and any accumulated material in the catch basin in Wellington St.

34. Any plantings and landscaping within the 100-foot Buffer Zone and AURA shall conform to the following:

- (a) No plant materials shall be used of any species which appears on the Massachusetts Division of Fisheries and Wildlife's list of invasive species.
- (b) Fertilizers, pesticides, or herbicides shall not be used within the Buffer Zone, except as noted in (c) unless a specific need for treating a particular specimen or species has been demonstrated to the Commission, and permission has been granted.
- (c) Fertilizers may be used at the time of installation of any plant materials, and once more within a year after planting.

35. The Commission, its employees and its agents shall have the right of entry onto the site to inspect for compliance with the terms of this Order of Conditions.

36. When requesting a Certificate of Compliance for this Order of Conditions, the applicant must submit a written statement from a qualified professional certifying that the completed work complies with the plans referenced in this Order, or a plan and statement describing any differences.

Arlington Spy Pond Tennis Courts Renovation - Existing Conditions Photos



View into courts from Wellington Street



View from Wellington Street towards Spy Pond Lane



Existing entrance to courts from Spy Pond Lane



View across courts toward Spy Pond Field

Arlington Spy Pond Tennis Courts Renovation - Existing Conditions Photos



View of existing walls along Wellington Street



Existing curb cut at new pathway



Existing CB to be removed and filled at NW corner



Proposed Color scheme for courts